

Service Manual

Tuner

QUARTZ Synthesizer AM/FM Stereo Tuner
(ST-G55A)

QUARTZ Synthesizer LW/MW/FM Stereo Tuner
(ST-G55AL)

ST-G55A

ST-G55AL

Color

(S) Silver Type
(K) Black Type



Area

color	area
(S) (K)	(EX) Continental Europe. (ST-G55A/G55AL)
(S) (K)	(EK) United Kingdom. (ST-G55AL)
(S) (K)	(EB) Belgium. (ST-G55AL)
(S) (K)	(EH) Holland. (ST-G55A)
(S) (K)	(EF) France. (ST-G55AL)
(S) (K)	(XA) Asia, Oceania, Latin America, Middle Near East and Africa. (ST-G55A)
(S) (K)	(XL) Australia. (ST-G55A)
(S) (K)	(PA) For East PX. (ST-G55A)
(S) (K)	(PE) European Military. (ST-G55A)
(S) (K)	(EG) F.R Germany. (ST-G55A)
(S) (K)	(Ei) Italy. (ST-G55A)

SPECIFICATIONS (DIN 45 500)

■ FM TUNER SECTION

Frequency range	87.50~108.00 MHz
	87.525~108.00 MHz (+25 kHz shift)
Sensitivity	1.5 μ V (IHF, usable)
S/N 30 dB	1.3 μ V (75 Ω)
S/N 26 dB	1.2 μ V (75 Ω)
S/N 20 dB	0.9 μ V (75 Ω)
IHF 46 dB stereo quieting sensitivity	28 μ V/75 Ω
Total harmonic distortion	
MONO (normal)	0.015%
STEREO (normal)	0.02%
S/N	
MONO	72 dB (80 dB, IHF)
STEREO	66 dB (73 dB, IHF)
Frequency response	4 Hz~18 kHz, +0.5 dB~-1.5 dB
Alternate channel selectivity	
normal $\pm$ 400 kHz	50 dB
super narrow $\pm$ 200 kHz	25 dB
Capture ratio	1.0 dB
Image rejection at 98 MHz	100 dB
IF rejection at 98 MHz	100 dB
Spurious response rejection at 98 MHz	110 dB
(For South Africa only)	
Image rejection at 98 MHz	55 dB
IF rejection at 98 MHz	90 dB
Spurious response rejection at 98 MHz	80 dB
AM suppression	55 dB

Stereo separation

1 kHz	60 dB
10 kHz	45 dB

Carrier leak

19 kHz	-55 dB (-60 dB, IHF)
38 kHz	-40 dB (-45 dB, IHF)

Channel balance (250 Hz~6,300 Hz)

	$\pm$ 1.0 dB
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Limiting point

	0.85 μ V
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Bandwidth

IF amplifier	180 kHz
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FM demodulator

	1000 kHz
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Antenna terminals

	75 Ω (unbalanced)
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■ AM TUNER SECTION (ST-G55A)

Frequency range

(For Europe, South Africa and Australia)

	522 kHz~1611 kHz (9 kHz-steps)
	530 kHz~1610 kHz (10 kHz-steps)

(For Saudi Arabia and others)

	531 kHz~1620 kHz (9 kHz-steps)
	530 kHz~1610 kHz (10 kHz-steps)

Sensitivity (S/N 20 dB)

	20 μ V, 300 μ V/m
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Selectivity at 999 kHz ($\pm$ 9 kHz)

	50 dB
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Image rejection at 999 kHz

	40 dB
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IF rejection at 999 kHz

	60 dB
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Technics

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Matsushita Electric Trading Co., Ltd.
6th Floor, World Trade Center Bldg.,
No. 4-1, Hamamatsu-cho 2-Chome, Minato-ku,
Tokyo 105, Japan

■ AM TUNER SECTION (ST-G55AL)

Frequency range	
MW	522 kHz~1611 kHz (9 kHz-steps) 530 kHz~1610 kHz (10 kHz-steps)
LW	155 kHz~353 kHz (9 kHz-steps) 153 kHz~351 kHz (-2 kHz shift)
Sensitivity (S/N 20 dB)	
MW	20 μ V, 300 μ V/m
LW	50 μ V
Selectivity (± 9 kHz)	
MW (at 999 kHz)	50 dB
LW (at 254 kHz)	50 dB
Image rejection	
MW (at 999 kHz)	40 dB
LW (at 254 kHz)	40 dB
IF rejection	
MW (at 999 kHz)	60 dB
LW (at 254 kHz)	35 dB

■ GENERAL

Output voltage	0.3V (0.6V IHF)
Power consumption	9W
Power supply	
For United Kingdom and Australia	AC 50 Hz/60 Hz, 240V
For continental Europe	AC 50 Hz/60 Hz, 220V
For others	AC 50 Hz/60 Hz, 110V/127V/220V/240V
Dimensions (W×H×D)	
	430 × 64 × 241 mm (16-30/32" × 2-17/32" × 9-1/2")
Weight	
	2.2 kg (4.8 lb.)

Notes:

1. Total harmonic distortion is measured by the digital spectrum analyzer (H.P. 3045 system).
2. Specifications are subject to change without notice. Weight and dimensions shown are approximate.

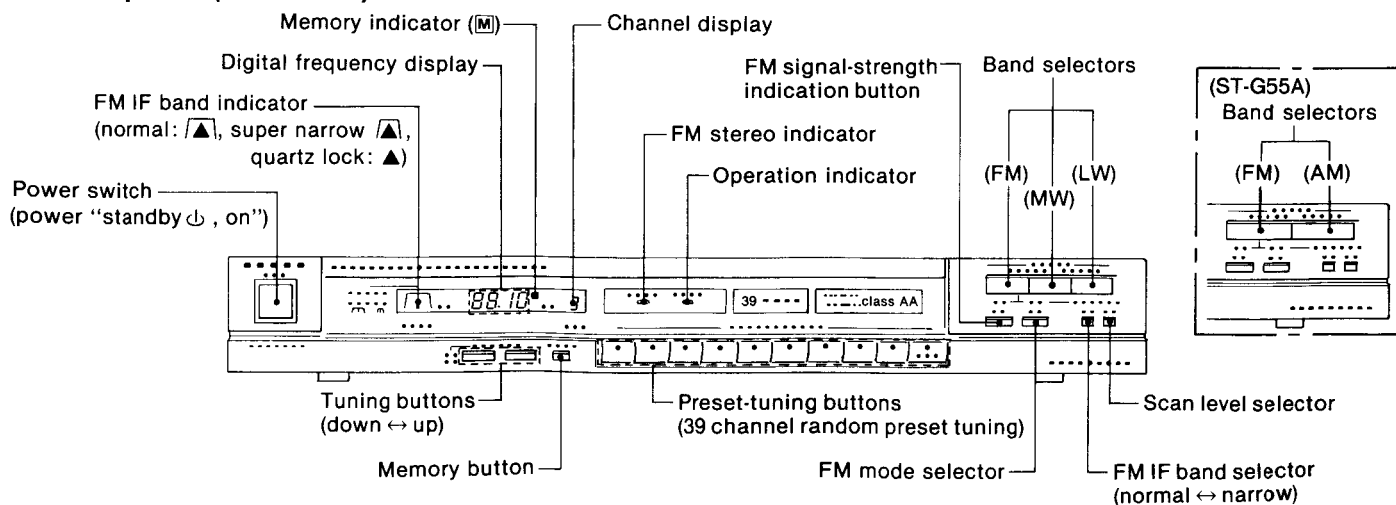
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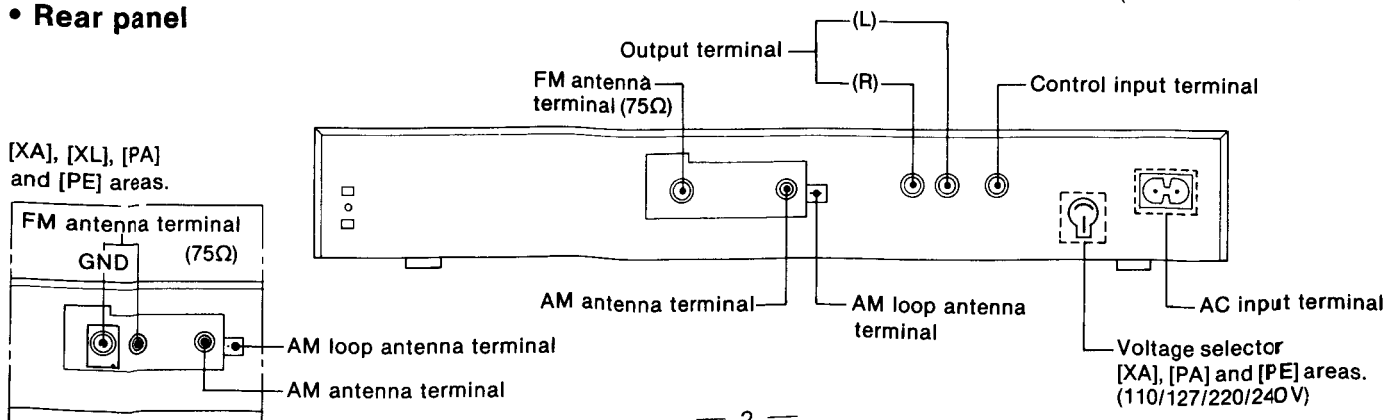
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■ LOCATION OF CONTROLS

• Front panel (ST-G55AL)



• Rear panel



Tuner

DEUTSCH

Verwenden Sie bitte diese Broschüre Zusammen
mit der Service-Anleitung für das Modell Nr.
ST-G55A/G55AL

■ MESSUNGEN UND JUSTIERUNGEN

AM/FM(ST-G55A) LW/MW/FM(ST-G55AL)

Einstellungen der Bedienelemente und zu verwendende Geräte.

- MW und UKW Meßsender (MW und UKW Nebsender)
- Stereo-Modulator
- Verzerrungs-Analysator
- Elektronische Wechselstrom-und Gleichstrom-Voltmeter(EVM)
- Keramischer Kondensator(200pF)
- Oszilloskop
- Frequenzzähler
- Drosselspule(100µH)
- Widerstand(100KΩ)

Anmerkung: Für **T201** (AM ZFT), **L203** (AM (MW)-OSZ, -Spule), **L251** (LW-Antennenspule), **L303** (L.P.F.) und **L301, L302** (L.P.F.), werden justiert Ersatzteil geliefert. Den Kern dieses Teils daher nicht drehen.

AM(MW)-HF-JUSTIERUNG

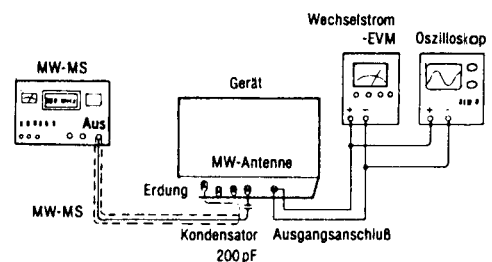
1. Der Testaufbau ist in der Abbildung gezeigt.
2. Stellen Sie die Einheit auf "**AM(MW)**" Betrieb.
3. Radio und Signalgenerator auf **612kHz** einstellen.
4. **L202** auf maximale Ausgangsleistung abgleichen.
5. Radio und Signalgenerator auf **1503kHz** einstellen.
6. **CT201** auf maximale Ausgangsleistung abgleichen.
7. Die Schritte 3 ~ 6 wiederholen.

Anmerkung:

Der Antenneneingang-Signalpegel muß so niedrig wie möglich und frei von automatischer Verstärkungsregelung (AGC) sein.

ZUSTAND DES MW-MESSENDERS

Modulation 30%
Modulationsfrequenz 400Hz



LW-HF-JUSTIERUNG(Nur ST-G55AL)

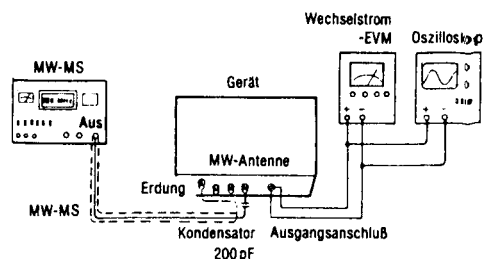
1. Der Testaufbau ist in der Abbildung gezeigt.
2. Stellen Sie die Einheit auf "**LW**" Betrieb.
3. Die Radiofrequenzanzeige und den Messender auf **155kHz** einstellen.
4. **L252** auf maximale Ausgangsleistung abgleichen.
5. Die Radiofrequenzanzeige und den Messender auf **353kHz** einstellen.
6. **CT251** auf maximale Ausgangsleistung abgleichen.
7. Die Schritte 3 ~ 6 wiederholen.

Anmerkung:

Der Antenneneingang-Signalpegel muß so niedrig wie möglich und frei von automatischer Verstärkungsregelung (AGC) sein.

ZUSTAND DES MW-MESSENDERS

Modulation 30%
Modulationsfrequenz 400Hz



UKW-MONO-VERZERRUNGS-JUSTIERUNG

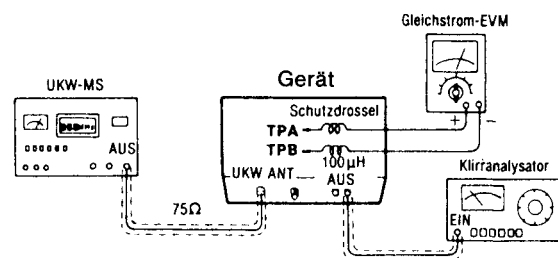
1. Der Testaufbau ist in der Abbildung gezeigt.
2. Stellen Sie die Einheit auf "FM(UKW)" Betrieb.
3. Die Radiofrequenzanzeige und den Messender auf 100,10MHz einstellen.
4. Den Kern von T101 so justieren, daß die im Signalzustand gemessene Spannung 0mV (0±50mV) im 300mV-Bereich beträgt.
5. T102 so justieren, daß der Verzerrungsfaktor des linken Kanals minimal wird.
6. Schritte 4 und 5 einige Male wiederholen.
7. Versichern Sie sich, daß die Verzerrungsfaktoren von Kanal L und Kanal R annähernd gleich sind und auf ein Minimum gehalten sind.

Anmerkung:

Für die Justierung ist ein Schraubendreher aus Kunststoff zu verwenden.

ZUSTAND DES UKW-MESSENDERS

Modulation 100%
Modulationsfrequenz 1kHz
Ausgangspegel 66dB



TPA = TP102, TPB = TP101

UKW STEREO KLIRRFAKTOR-JUSTIERUNG

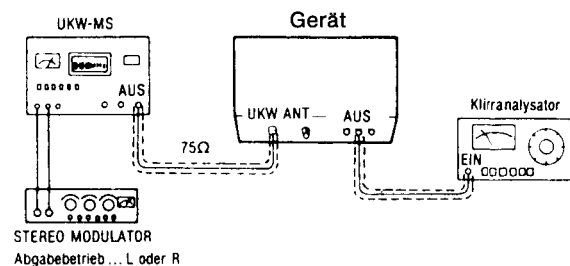
1. Der Testaufbau ist in der Abbildung gezeigt.
2. Stellen Sie die Einheit auf "FM(UKW)" Betrieb.
3. Die Radiofrequenzanzeige und den Messender auf 100,10MHz einstellen.
4. T1 so justieren, daß der Verzerrungsfaktor des linken Kanals minimal wird.
5. Überprüfen, daß die Verzerrungsfaktoren des linken und rechten Kanals fast gleich sind.

Anmerkung:

Für die Justierung ist ein Schraubendreher aus Kunststoff zu verwenden.

ZUSTAND DES UKW-MESSENDERS

Modulation "L" oder "R" Betriebsart
45%, Pilotssignal 10%
Modulationsfrequenz 1kHz (Pilot 19kHz)
Ausgangspegel 66dB

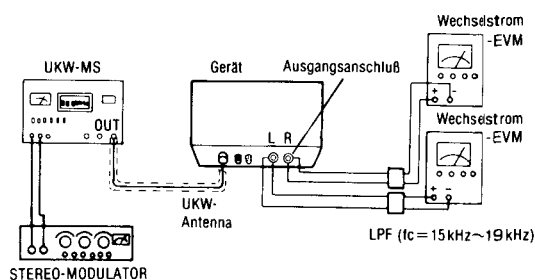


TRENNUNGS-JUSTIERUNG

1. Der Testaufbau ist in der Abbildung gezeigt.
2. Stellen Sie die Einheit auf "FM" Betrieb.
3. Die Radiofrequenzanzeige und den Messender auf 100,10MHz einstellen.
4. VR301 so justieren, daß der R-Ausgang minimal ist, wenn der Stereomodulator im L-Betriebszustand (Linker Kanal moduliert) ist.

ZUSTAND DES UKW-MESSENDERS

Modulation "L" oder "R" Betriebsart
45%, Pilotssignal 10%
Modulationsfrequenz 1kHz (Pilot 19kHz)
Ausgangspegel 66dB

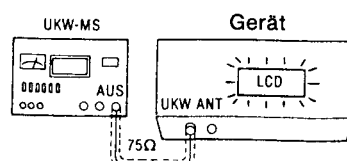


SIGNALSTÄRKEPEGEL-JUSTIERUNG

1. Der Testaufbau ist in der Abbildung gezeigt.
2. Stellen Sie die Einheit auf "FM" und "normal" Betrieb.
3. Die Radiofrequenzanzeige und den Messender auf 100,10MHz einstellen.
4. Die Flüssigkristallanzeige-Betriebsart von "Frequenz" auf "dB" umschalten, durch Drücken der UKW-Signaltaste.
5. VR101 so justieren, daß 54dB angezeigt wird.
6. Überprüfen, daß der Signalstärkepegel 22 ~ 38dB beträgt, wenn die Eingangsleistung 30dB ist.

ZUSTAND DES UKW-MESSENDERS

Modulation 30%
Modulationsfrequenz 1kHz
Ausgangspegel 60dB (36dB)



FRANÇAIS

Ceci est à utiliser conjointement avec manuel d'entretien du modèle No. ST-G55A/G55AL

■ MEASURES ET REGLAGES

A.M./M.F. (ST-G55A)

LW/MW/M.F. (ST-G55AL)

Positionnements des commandes et équipement utilisé

- Générateur de signaux AM et FM (AM et FM-SG)
- Bobine d'amortissement d'arrêt (100µH)
- Modulateur stéréophonique
- Résistance (100kΩ)
- Analyseur de distorsion
- Condensateur céramique (200pF)
- Oscilloscope
- Voltmètre électronique à C.A. et C.C. (EVM).
- Compteur de fréquence

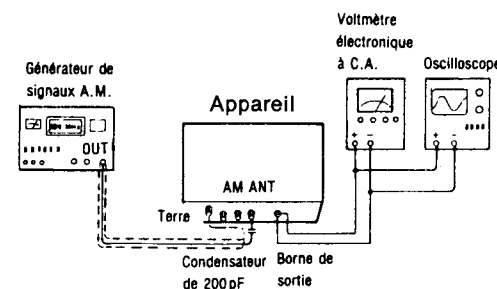
Nota: Pour T201 (A.M.) F.I., L203 (bobine oscil. de AM (MW), L251 (bobine ANT LW), L303 (L.P.F.) et L301, L302 (L.P.F.), des éléments réglés sont fournis. Aussi, ne pas tourner les noyaux de ces pièces.

REGLAGE DE O.M.-H.F.

1. Le raccordement de l'équipement d'essai est montré sur l'illustration.
2. Régler l'appareil sur le mode "AM(MW)".
3. Régler le cadran radio et le générateur de signaux sur 612kHz.
4. Régler L202 pour une sortie maximale.
5. Régler le cadran radio et le générateur de signaux sur 1503kHz.
6. Régler CT201 pour une sortie maximale.
7. Répéter les étapes 3 ~ 6.

Nota: Le niveau d'entrée d'antenne doit être aussi bas que possible étant libéré de la commande automatique de gain.

CONDITION DU GENERATEUR DE SIGNAUX A.M.
Modulation 30%
Modulationsfrequenz 400Hz

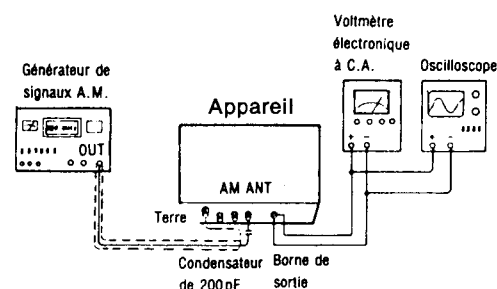


REGLAGE DE RE-LW (ST-G55AL seulement)

1. Le raccordement de l'équipement d'essai est montré sur l'illustration.
2. Régler l'appareil sur le mode "LW".
3. Ajuster le réglage de l'affichage de radiofréquence et du générateur de signaux sur 155kHz.
4. Régler L252 pour une sortie maximale.
5. Ajuster le réglage de l'affichage de radiofréquence et du générateur de signaux sur 353kHz.
6. Régler CT251 pour une sortie maximale.
7. Répéter les étapes 3 ~ 6.

Nota: Le niveau d'entrée d'antenne doit être aussi bas que possible étant libéré de la commande automatique de gain.

CONDITION DU GENERATEUR DE SIGNAUX A.M.
Modulation 30%
Modulationsfrequenz 400Hz

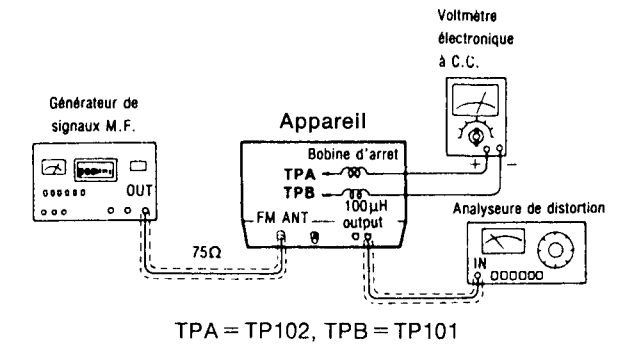


REGLAGE DE DISTORSION MONOPHONIQUE M.F.

1. Le raccordement de l'équipement d'essai est montré sur l'illustration.
2. Régler l'appareil sur le mode "FM".
3. Ajuster le réglage de l'affichage de radiofréquence et du générateur de signaux sur 100.10MHz.
4. Régler le noyau de T101 de telle sorte que la tension mesurée sur le mode de signaux soit de 0mV(0±50mV) dans une plage de 300mV.
5. Ajuster T102 de telle que le facteur de distorsion du canal de gauche soit minimisé.
6. Répéter les étapes 4 et 5 quelques fois.
7. S'assurer que les facteurs de distorsion du canal de gauche et du canal de droite soient sensiblement les mêmes et au minimum.

Nota: Le tournevis de réglage utilisé devra être fait en résines.

CONDITION DU GENERATEUR DE SIGNAUX M.F.
Modulation 100%
Fréquenz de modulation 1kHz
Niveau de sortie 66dB



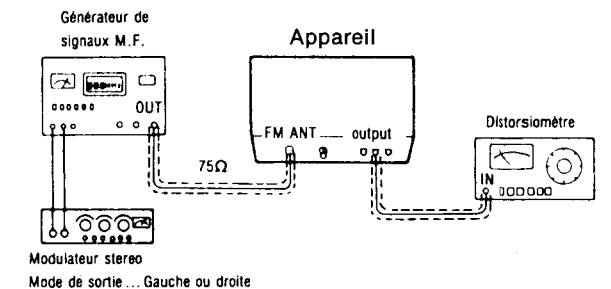
TPA = TP102, TPB = TP101

AJUSTEMENT DE LA DISTORSION STEREO FM

1. Le raccordement de l'équipement d'essai est montré sur l'illustration.
2. Régler l'appareil sur le mode "FM".
3. Ajuster le réglage de l'affichage de radiofréquence et du générateur de signaux sur 100.10MHz.
4. Ajuster T1 de telle que le facteur de distorsion du canal de gauche soit minimisé.
5. S'assurer que les facteurs de distorsion du canal de gauche et du canal de droite soient sensiblement les mêmes l'un par rapport à l'autre.

Nota: Le tournevis de réglage utilisé devra être fait en résines.

CONDITION DU GENERATEUR DE SIGNAUX M.F.
Modulation Mode "G" ou mode "D" à 45%,
Signal de commande à 10%
Fréquenz de modulation 1kHz, Pilot(19kHz)
Niveau de sortie 66dB

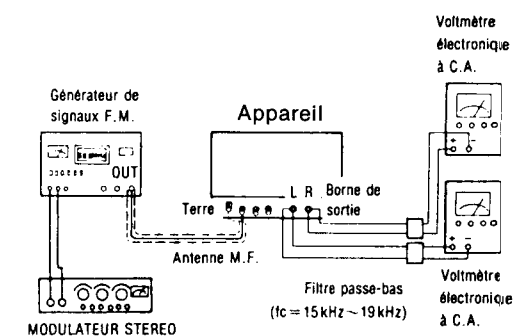


Modulateur stéréo
Mode de sortie ... Gauche ou droite

REGLAGE DE SEPARATION

1. Le raccordement de l'équipement d'essai est montré sur l'illustration.
2. Régler l'appareil sur le mode "FM".
3. Ajuster le réglage de l'affichage de radiofréquence et du générateur de signaux sur 100.10MHz.
4. Ajuster VR301 de telle sorte que la sortie de droite soit minimisée lorsque le modulateur stéréo est sur le mode "G". (modulation de canal de gauche.)

CONDITION DU GENERATEUR DE SIGNAUX M.F.
Modulation Mode "G" ou mode "D" à 45%,
Signal de commande à 10%
Fréquenz de modulation 1kHz, Pilot(19kHz)
Niveau de sortie 66dB

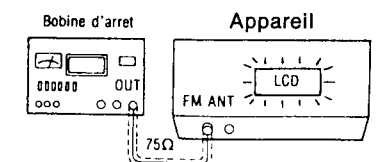


MODULATEUR STEREO

REGLAGE DU NIVEAU D'INTENSITE DE REPEDITION

1. Le raccordement de l'équipement d'essai est montré sur l'illustration.
2. Régler l'appareil sur le mode "FM" et "normal".
3. Ajuster le réglage de l'affichage de radiofréquence et du générateur de signaux sur 100.10MHz.
4. Changer l'affichage à cristaux liquides de "fréquence" sur "dB" en appuyant sur la touche de signaux FM(M.F.).
5. Ajuster VR101 de telle sorte que 54dB soit indiqué.
6. S'assurer que le niveau d'intensité de réception soit de 22~38dB lorsque l'entrée est de 30dB.

CONDITION DU GENERATEUR DE SIGNAUX M.F.
Modulation 30%
Fréquenz de modulation 1kHz
Niveau de sortie 60dB(36dB)



ESPAÑOL

Sírvase utilizarse junto con manual de servicio para el model No. ST-G55A/G55AL

MEDICIONES Y AJUSTES

AM/FM(ST-G55A) LW/MW/FM(ST-G55AL)

Posiciones de control y equipo usado.

- Generador de señales de AM y FM (AM y FM-SG)
- Voltímetro electrónico de CA y CC(EVM)
- Analizador de distorsiones
- Osciloscopio
- Frecuencímetro
- Frecuencímetro
- Bobina de choque(100μH)
- Resistor(100kΩ)
- Condensador cerámico(200pF)

Nota: Para T201 (AM-IFT), L203 (bobina de OSC. AM (MW)), L251 (bobina antena LO), L303 (L.P.F.) y L301, L302 (L.P.F.) son suministradas piezas ajustadas. Por lo tanto, no gire los núcleos de estas piezas.

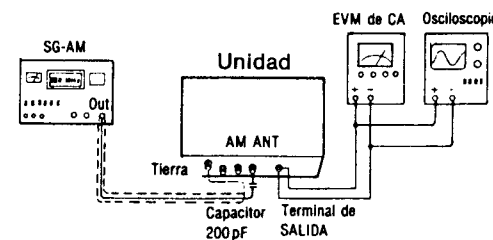
AJUSTE DE AM(MW)-RF

- 1.La conexión del equipo de pruebas se muestra en la figura.
- 2.Poner la unidad en modalidad de "AM(MW)".
- 3.Poner la presentación de la radio y el generador de señales en 612kHz.
- 4.Ajustar L202 para salida máxima.
- 5.Poner la presentación de la radio y el generador de señales en 1503kHz.
- 6.Ajustar CT201 para salida máxima.
- 7.Repita los pasos 3. al 6.

Nota:

El nivel de entrada de antena ha de ser lo más bajo posible estando libre de AGC (control automático de ganancia).

CONDICION DE GENERADOR DE SEÑALES DE AM
Modulación 30%
Frecuencia de modulación 400Hz



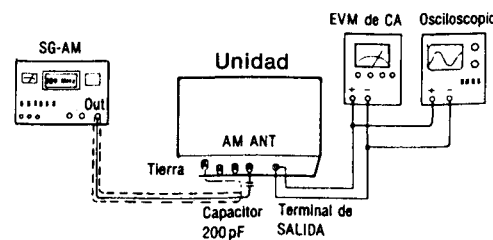
AJUSTE DE LO-RF (Sólo ST-G55AL)

- 1.La conexión del equipo de pruebas se muestra en la figura.
- 2.Poner la unidad en modalidad de "LW".
- 3.Poner la puesta de la presentación de radiofrecuencia y generador de señales a 155kHz.
- 4.Ajustar L252 para salida máxima.
- 5.Poner la puesta de la presentación de radiofrecuencia y generador de señales a 353kHz.
- 6.Ajustar CT251 para salida máxima.
- 7.Repitar los pasos 3. al 6.

Nota:

El nivel de entrada de antena ha de ser lo más bajo posible estando libre de AGC (control automático de ganancia).

CONDICION DE GENERADOR DE SEÑALES DE AM
Modulación 30%
Frecuencia de modulación 400Hz



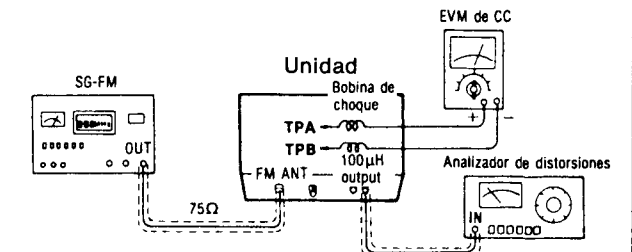
AJUSTE DE DISTORSION MONO FM

- 1.La conexión del equipo de pruebas se muestra en la figura.
- 2.Poner la unidad en modalidad de "FM".
- 3.Poner la puesta de la presentación de radiofrecuencia y generador de señales a 100,10MHz.
- 4.Ajustar el núcleo de T101 de manera que el voltaje medido en modalidad de señal sea 0mV (0±50mV).
- 5.Ajustar T102 de manera que el factor de distorsión de CH-I se minimice.
- 6.Repetir los pasos 4 y 5 algunas veces.
- 7.Asegurarse de que los factores de distorsión de CH-I y CH-D sean casi los mismos y los mínimos.

Nota:

El destornillador de ajuste usado debe estar hecho de resina.

CONDICION DE GENERADOR DE SEÑALES DE FM
Modulación 100%
Frecuencia de modulación 1kHz
Nivel de salida 66dB



TPA = TP102, TPB = TP101

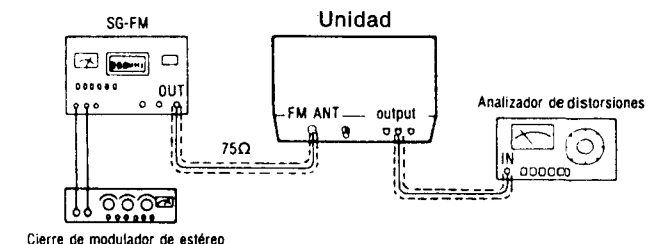
AJUSTE DE DISTORSION DE ESTEREO EN FM

- 1.La conexión del equipo de pruebas se muestra en la figura.
- 2.Poner la unidad en modalidad de "FM".
- 3.Poner la puesta de la presentación de radiofrecuencia y generador de señales a 100,10MHz.
- 4.Ajustar T1 de manera que el factor de distorsión de CH-I se minimice.
- 5.Asegurarse de que los factores de distorsión de CH-I y CH-D sean casi los mismos uno con el otro.

Nota:

El destornillador de ajuste usado debe estar hecho de resina.

CONDICION DE GENERADOR DE SEÑALES DE FM
Modulación Modalidad de "I" o modalidad de "D" 45%, Piloto 10%
Frecuencia de modulación 1kHz, Piloto(19kHz)
Nivel de salida 66dB

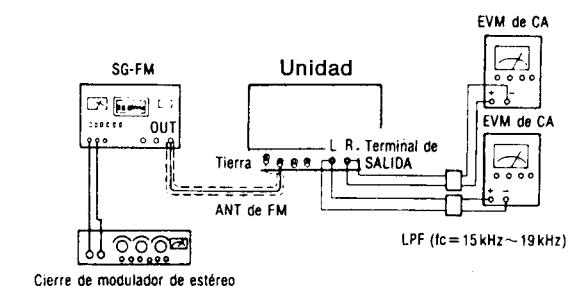


Cierre de modulador de estereo

AJUSTE DE SEPARACION

- 1.La conexión del equipo pruebas se muestra en la figura.
- 2.Poner la unidad en modalidad de "FM".
- 3.Poner la puesta de la presentación de radiofrecuencia y generador de señales a 100,10MHz.
- 4.Ajustar VR301 de manera que la salida de D quede minimizada cuando el modulador de estereo esté en la modalidad "I". (modulación de CH-I.)

CONDICION DE GENERADOR DE SEÑALES DE FM
Modulación Modalidad de "I" o modalidad de "D" 45%, Piloto 10%
Frecuencia de modulación 1kHz, Piloto(19kHz)
Nivel de salida 66dB

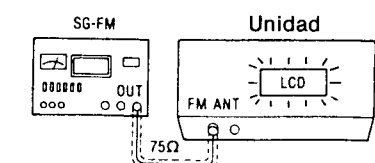


Cierre de modulador de estereo

AJUSTE DE NIVEL DE INTENSIDAD DE SEÑAL

- 1.La conexión del equipo de pruebas se muestra en la figura.
- 2.Poner la unidad en modalidad de "FM" y "normal".
- 3.Poner la puesta de la presentación de radiofrecuencia y generador de señales a 100,10MHz.
- 4.Cambiar la presentación LCD de "frecuencia" a "dB" pulsando el botón de señal de FM.
- 5.Ajustar VR101 de manera que se indiquen 54dB.
- 6.Asegurarse de que el nivel de intensidad de señal sea 22 ~ 38dB cuando la entrada sea 30dB.

CONDICION DE GENERADOR DE SEÑALES DE FM
Modulación 30%
Frecuencia de modulación 1kHz
Nivel de salida 60dB(36dB)



DISASSEMBLY INSTRUCTIONS

Ref. No. 1	How to remove the cabinet	Ref. No. 2	How to remove the main P.C.B.
Procedure 1	Remove the 4 screws.	Procedure 1 → 2	- Remove the 10 screws (①~⑩). - Remove the 4 screws (⑪~⑭). - Slightly pull the front panel toward you and remove the main P.C.B.
Ref. No. 3	How to remove the front panel		
Procedure 1 → 2 → 3	- Remove the power button. - Remove the 1 Nylon rivet. - Remove the 3 flatwires (A~C).		
Ref. No. 4	How to remove the sub panel		
Procedure 1 → 2 → 3 → 4	Push out the 9 tabs on the bottom and top side of the sub panel by used minusdriver.		

Ref. No. 5	How to remove the FM/AM (MW/LW) Channel switch
Procedure 1 → 2 → 3 → 4 → 5	Remove the 6 screws (①~⑥).

ACCESSORIES

AC power supply 1 (SFDAC05E03 [EX, EF, EB, EH, EG, Ei]) (SFDAC05G02 [EK]) (SJA163 [XL]) (SJA168-1 [XA, PA, PE])	FM indoor antenna 1 (SSA270M [EX, EK, EF, EB, EH, EG, Ei]) (SSA269M [XL, XA, PA, PE])	Stereo connection cable 1 (SJP2249-1)
AM loop antenna 1 (SPB1152T)	AM antenna holders 2 (SMA231M) (SMA233-1M)	Screws 2 (XTN3+10AFZ)

TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

No. 1 AN6554F 14 pin MN1219 18 pin		No. 1 UPD1714G528 64 pin		No. 1 AN7274NS 28 pin AN7472S	
AN278 No. 1	2SC1310F, 2SD592Q B C E	2SK301S Drain Gate Source	2SA1309Q, 2SC3311Q, 2SC2787L E C B	KV1260Z Anode 1 Cathode Anode 2 A1 Ca A2	MA162A, MA165, 1SR35200 Anode Cathode Ca A
MA4062M, MA4082M, MA4091M, MA4140M, MA4043M Anode Cathode Ca A	LN446YP, LN846RP Anode Cathode Ca A				

MEASUREMENTS AND ADJUSTMENTS

AM/FM(ST-G55A) LW/MW/FM(ST-G55AL)

Control positions and equipment used

- AM and FM signal generator(AM and FM-SG)
- Stereo modulator
- Distortion analyser
- Oscilloscope
- Frequency counter
- Choke coil (100 μ H)
- Resistor(100k Ω)
- Ceramic capacitor(200pF)
- AC and DC electronic voltmeter(EVM)

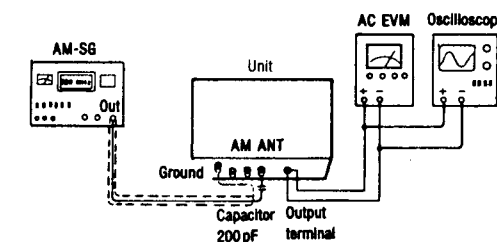
Note: For T201 (AM (MW)-IFT), L203 (AM (MW) OSC coil), L251 (LW ANT coil), L303 (L.P.F.) and L301, L302 (L.P.F.), they are supplied as adjusted parts. So, do not turn the cores of the parts.

AM(MW)-RF ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Set the unit to "AM(MW)" mode.
3. Set the radio and signal generator to 612kHz.
4. Adjust L202 for maximum output.
5. Set the radio dial and signal generator to 1503kHz.
6. Adjust CT201 for maximum output.
7. Repeat steps 3 ~ 6.

Note: Antenna input level must be as low as possible being free from AGC.

AM SIGNAL GENERATOR CONDITION
Modulation 30%
Modulation frequency 400Hz

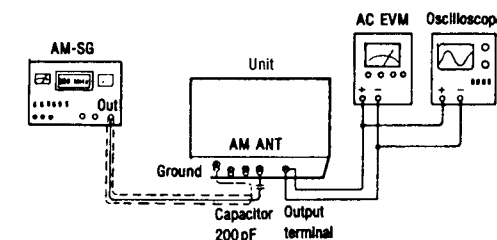


LW-RF ADJUSTMENT (ST-G55AL only)

1. Test equipment connection is shown in figure.
2. Set the unit to "LW" mode.
3. Set the radio frequency display and signal generator to 155kHz.
4. Adjust L252 for maximum output.
5. Set the radio frequency display and signal generator to 353kHz.
6. Adjust CT251 for maximum output.
7. Repeat steps 3 ~ 6.

Note: Antenna input level must be as low as possible being free from AGC.

AM SIGNAL GENERATOR CONDITION
Modulation 30%
Modulation frequency 400Hz

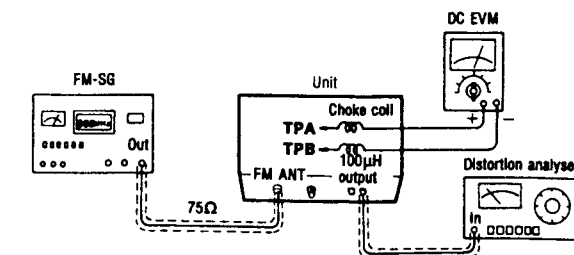


FM MONO DISTORTION ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Set the unit to "FM" mode.
3. Set the radio frequency display and signal generator to 100.10MHz.
4. Adjust the core of T101 so that the voltage measured in signal mode is 0mV(0 $\pm$ 50mV) in 300mV range.
5. Adjust T102 so that the distortion factor of L-CH is minimized.
6. Repeat steps 4 and 5.
7. Make sure that the distortion factors of L-CH and R-CH are nearly the same and minimum.

Note: The adjusting screwdriver used should be made of resin.

FM SIGNAL GENERATOR CONDITION
Modulation 100%
Modulation frequency 1kHz
Output level 66dB



TPA = TP102, TPB = TP101

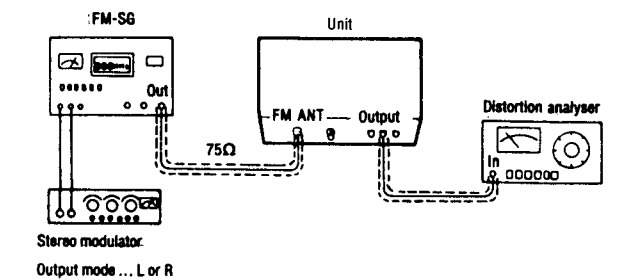
FM STEREO DISTORTION ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Set the unit to "FM" mode.
3. Set the radio frequency display and signal generator to 100.10MHz.
4. Adjust T1 so that the distortion factor of L-CH is minimized.
5. Make sure that the distortion factors of L-CH and R-CH are nearly the same and minimum.

Note: The adjusting screwdriver used should be made of resin.

FM SIGNAL GENERATOR CONDITION

Modulation "L" mode or "R" mode 45%,
Pilot 10%
Modulation frequency 1kHz(Pilot 19kHz)
Output level 66dB

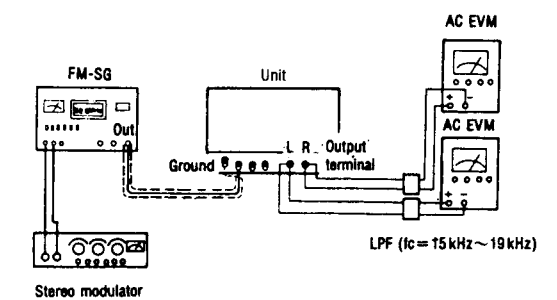


SEPARATION ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Set the unit to "FM" mode.
3. Set the radio frequency display and signal generator to 100.10MHz.
4. Adjust VR301 so that the R-CH output is minimized when stereo modulator is in "L" (L-CH modulation) mode.

FM SIGNAL GENERATOR CONDITION

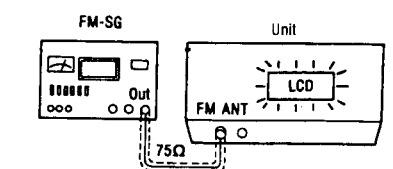
Modulation "L" mode or "R" mode 45%,
Pilot 10%
Modulation frequency 1kHz(Pilot 19kHz)
Output level 66dB



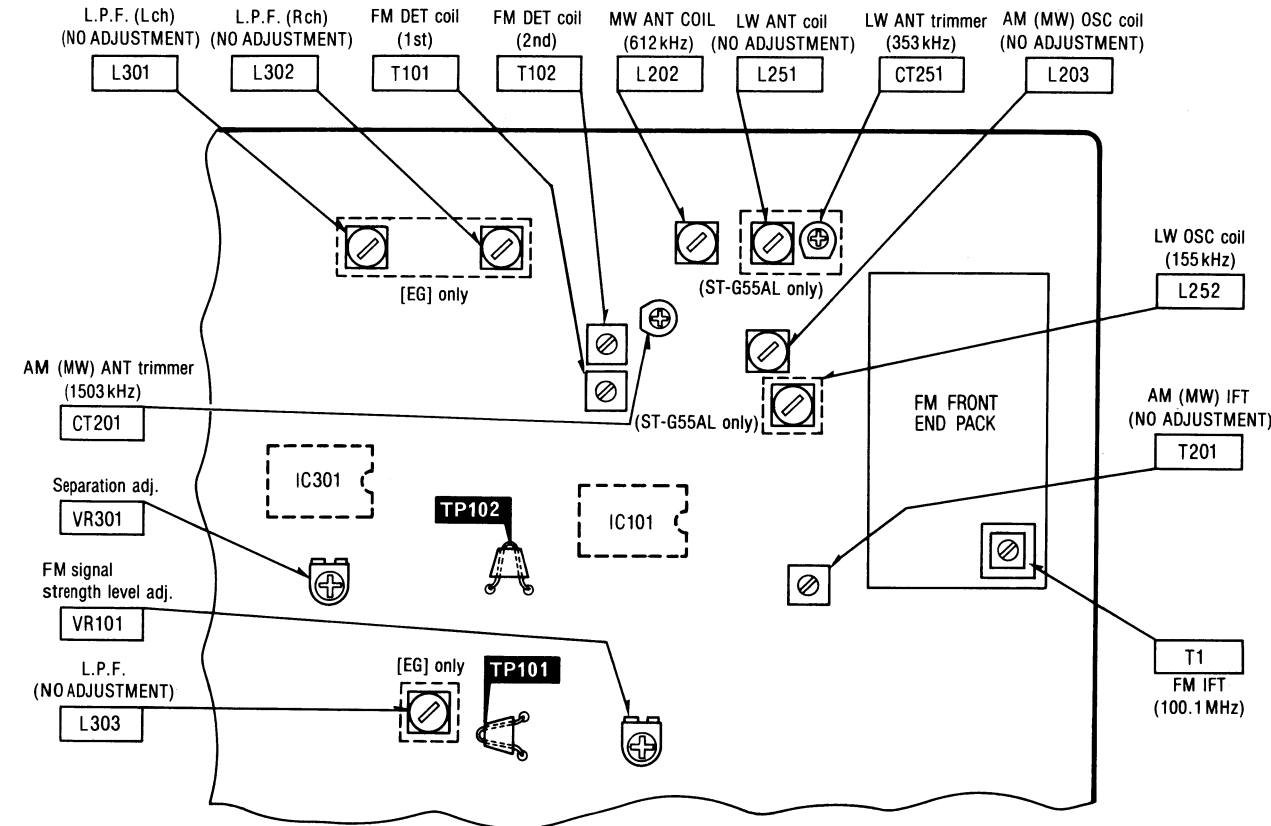
SIGNAL STRENGTH LEVEL ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Set the unit to "FM" and "normal" mode.
3. Set the radio frequency display and signal generator to 100.10MHz.
4. Change LCD display from "frequency" to "dB" by pressing the FM signal button.
5. Adjust VR101 so that 54dB is indicated. "54dB" is indicated.
6. Make sure that the signal strength level is 22~38dB when the input is 30dB.

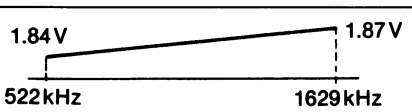
FM SIGNAL GENERATOR CONDITION
Modulation 30%
Modulation frequency 1kHz
Output level 60dB(36dB)

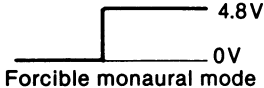
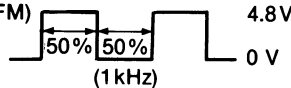
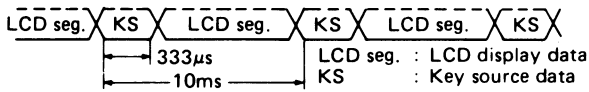
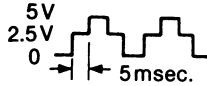


•Adjustment Points

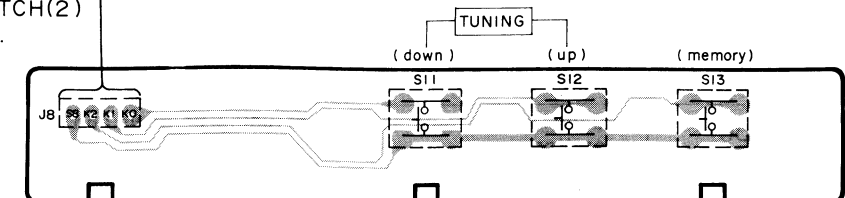


■ FUNCTION OF TERMINAL (IC901: UPD1714G528)

PIN NO.	IN/OUT	MARK	DESCRIPTION OF TERMINAL
1	—	NO	Not used in this unit.
2	OUTPUT (ST-G55AL only)	E01	Error output of PLL. The frequency is output as a result of comparison between crystal frequency and FM or AM (MW/LW) station frequency.
3	OUTPUT	E02	
4	—	GND	Connected to ground.
5	INPUT	AM	Input for AM OSC output. 
6	INPUT	FM	Input for FM OSC output frequency divided to 1/32 or 1/33 by pre-scaler.
7	INPUT	CE	Power supply detection. “H” input with it connected to home-use power outlet socket. H → 4V, L → 0V
8	—	GND	Ground terminal.
9	OUTPUT	MUTE	This is the output terminal to eliminate shock noise due to unlocking at PLL. < Muting output > 1. Pin 7 (CE) is L → H or H → L. 2. Power switch “off”. 3. Frequency change. [(up/down, FM ↔ AM (MW/LW))] 4. FM IF selection. 
10	OUTPUT	REC	Not used in this unit.
11	OUTPUT	EM	Main memory and sub-memory selection for IC902.
12	OUTPUT	SDC	Usually “H”, “L” output in “preset tuning, up/down and band selector” operation.
13	OUTPUT	AM select	“H” output in AM mode.

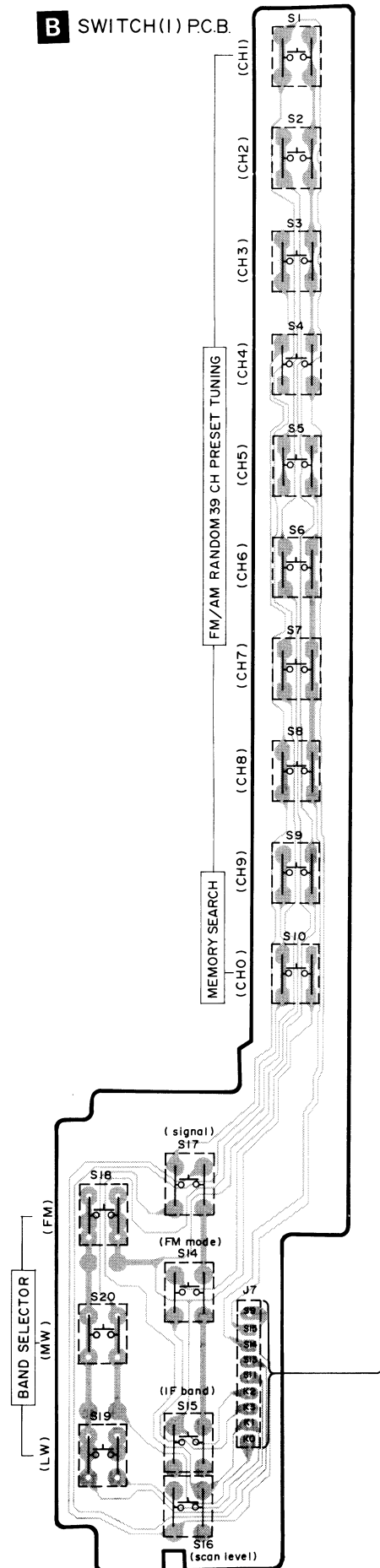
PIN NO.	IN/OUT	MARK	DESCRIPTION OF TERMINAL																																			
14	———	FM select	Not used in this unit.																																			
15	OUTPUT (ST-G55AL only)	LM select	“H” output in LW mode.																																			
16	———	SLEEP	Not used in this unit.																																			
17	———	POWER	Not used in this unit.																																			
18	INPUT	REMOTE	Remote control input terminal.																																			
19	INPUT	SD	Station detection. 1. Signal received → H 2. NO signal → L																																			
20	OUTPUT	IF SW	FM IF range selection. 1. Super narrow mode → L 2. Normal mode → H																																			
21	OUTPUT	MONO	Forcible monaural selection. 																																			
22	———	STAND BY	Not used in this unit.																																			
23	OUTPUT	$\overline{\text{CE}}$	Chip enable control for IC902.																																			
24	OUTPUT	X OUT	Connecting terminal for crystal oscillator. The crystal connected is at 4.5 MHz.																																			
25	INPUT	X IN																																				
26	INPUT	V _{DD}	Power supply terminal. (4.8V)																																			
27	OUTPUT	CGP	Clock pulse waveform output. (FM) 																																			
28~39	OUTPUT	S27~S16	Segment signal output for LCD display.																																			
40~55	OUTPUT	S15~S0	Segment signal output and key source signal output for LCD display.  LCD seg. : LCD display data KS : Key source data																																			
56	OUTPUT	COM0	Common of LCD. 																																			
57		COM1																																				
58	INPUT	V _{DD}	Power supply terminal.																																			
59~62	INPUT	K3~K0	Input terminal for key return signal from external key matrix. <table border="1"><caption>[KEY MATRIX]</caption><tr><th>Pin No.</th><th>40</th><th>41</th><th>42</th><th>44</th><th>46</th><th>47</th></tr><tr><td>59</td><td>CH1</td><td>CH5</td><td>CH9</td><td>—</td><td>FM mode</td><td>—</td></tr><tr><td>60</td><td>CH2</td><td>CH6</td><td>CH0</td><td>FM</td><td>IF band</td><td>memo</td></tr><tr><td>61</td><td>CH3</td><td>CH7</td><td>—</td><td>LW</td><td>Scan level</td><td>up</td></tr><tr><td>62</td><td>CH4</td><td>CH8</td><td>—</td><td>MW (AM)</td><td>Signal</td><td>down</td></tr></table>	Pin No.	40	41	42	44	46	47	59	CH1	CH5	CH9	—	FM mode	—	60	CH2	CH6	CH0	FM	IF band	memo	61	CH3	CH7	—	LW	Scan level	up	62	CH4	CH8	—	MW (AM)	Signal	down
Pin No.	40	41	42	44	46	47																																
59	CH1	CH5	CH9	—	FM mode	—																																
60	CH2	CH6	CH0	FM	IF band	memo																																
61	CH3	CH7	—	LW	Scan level	up																																
62	CH4	CH8	—	MW (AM)	Signal	down																																
63	INPUT	AD	Electromagnetic field intensity level input is changed from analog to digital.																																			
64	INPUT	$\overline{\text{INT}}$	Remote control input terminal.																																			

B SWITCH (I) P.C.B.

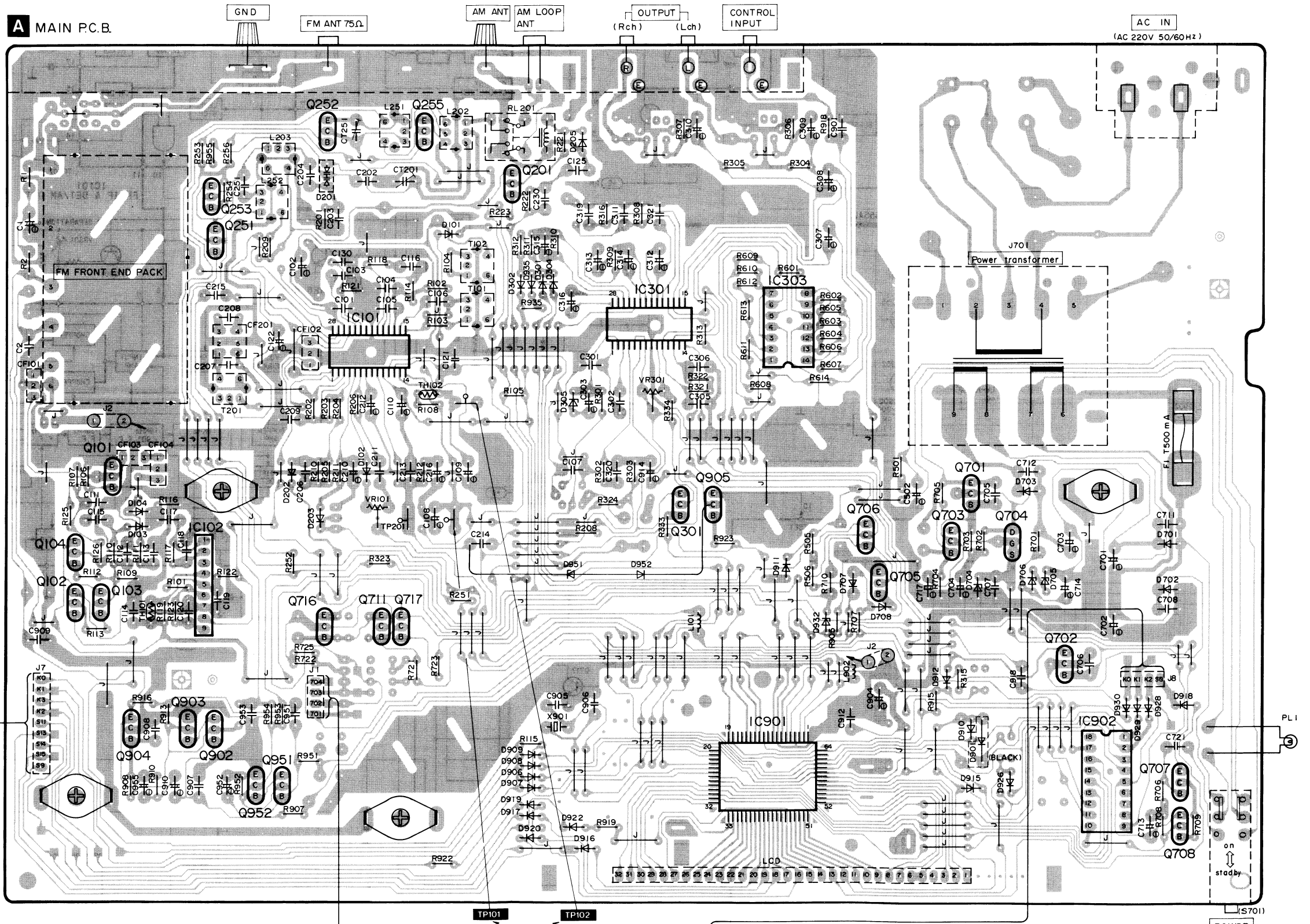


CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM (ST-G55AL)

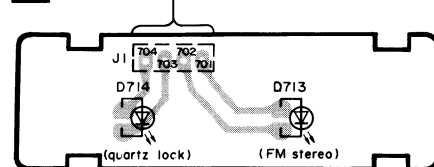
B SWITCH(1) P.C.B.



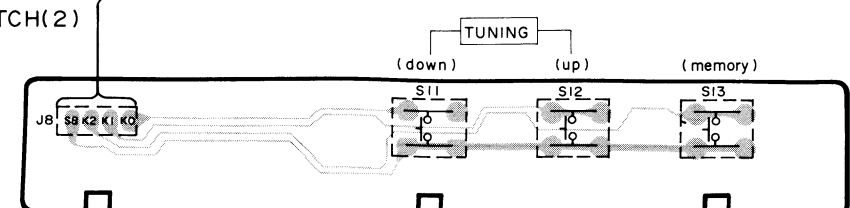
A MAIN P.C.B.



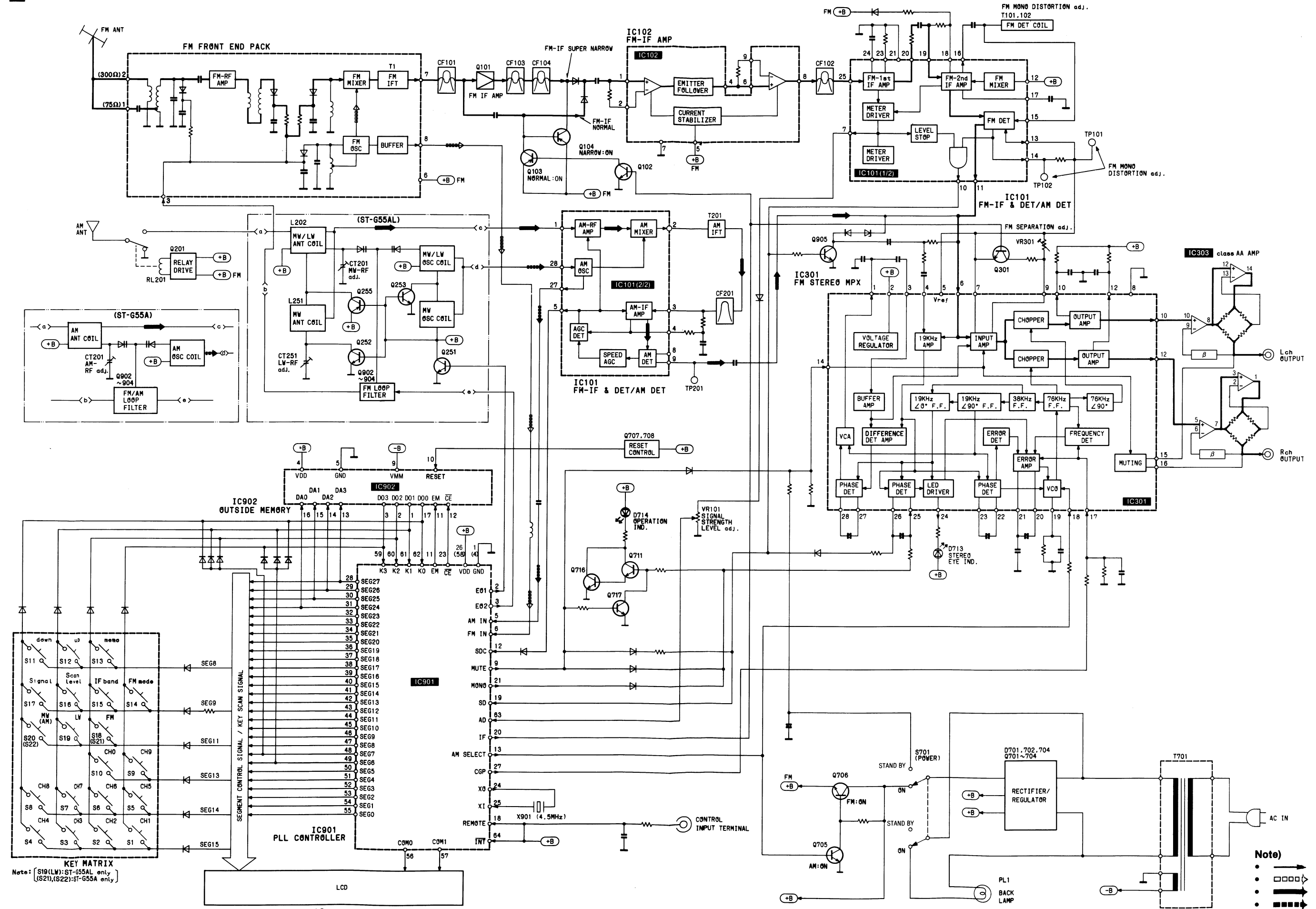
C LED P.C.B.



D SWITCH(2) P.C.B.



BLOCK DIAGRAM



Notes:

- * Important safety notice:
Components identified by mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
- * Bracketed indications in Ref. No. columns specify the area.
Parts without these indications can be used for all areas.

Example				
ERD	25	F	J	102
Type	Wattage	Shape	Tolerance	Value
ERX	2	AN	J	471
Type	Wattage	Shape	Tolerance	Value
				$47 \times 10^{-1} \text{ (ohm)}$

Example				
<u>ECKD</u>	<u>1H</u>	<u>102</u>	<u>Z</u>	<u>F</u>
Type	Voltage	Value	Tolerance	Peculiarity
<u>ECEA</u>	<u>50</u>	<u>M</u>		<u>330</u>
Type	Voltage	Peculiarity		Value (33x10 ⁿ microfarad)

Resistor Type	Wattage	Tolerance
ERD : Carbon	10 : 1/8W	J : $\pm 5\%$
ERG : Metal Oxide	12 : 1/2W	F : $\pm 1\%$
ERX : Metal Film	25 : 1/4W	G : $\pm 2\%$
ERQ : Fuse Type Metal	1A : 1W	K : $\pm 10\%$
ERD (C L) : Carbon (chip)	18 : 1/8W	
ERO (C K) : Metal Film (chip)	S2 : 1/4W	
ERC : Solid	S1 : 1/2W	
	2F : 1/4W	
	50 : 1/2W	
	2A : 2W	

Capacitor Type	Voltage	Tolerance
ECE : Electrolytic	0J : 6.3V	C : ±0.25pF
ECCD : Ceramic	1A : 10V	J : ±5%
ECKD : Ceramic	1C : 16V	K : ±10%
ECQM : Polyester	1E : 25V	Z : ±80%
	1H : 50V	-20%
ECQP : Polypropylene	1V : 35V	P : +100%
	50 : 50V	-0%
ECG : Ceramic	05 : 50V	M : ±20%
ECE□□□N : Non Polar Electrolytic	2H : 500V	
	2A : 100V	D : ±0.5pF
QCU□ : Ceramic (Chip Type)	1 : 100V	G : ±2%
ECUX : Ceramic (Chip Type)	KC : 400V AC	
ECF : Semiconductor	KC : 125VAC (UL)	
	1J : 63V	
EECW : Liquid electrolyte double layer capacitor		

Ref. No.	Part No.	Part Code	Ref. No.	Part No.	Part Code	Ref. No.	Part No.	Part Code
C208	RCBS1H680JLY	001 103 5640 4	C311	ECQP2A391GZ	001 106 4422 1	C721	ECQV1H104JZ	001 106 2571 7
C209	ECKD1H103PF	001 103 1449 7	C312	ECEA1VU100	001 120 3270 1	C901	ECKD1H103PF	001 103 1449 7
C210	ECEA0JU330	001 120 3162 4	C313	ECEA1HUR47	001 120 3249 8	C904	ECEA0JU471	001 120 2924 0
C211	ECKD1H103PF	001 103 1449 7	C314, C315	ECEA1HUR22	001 120 3247 0	C905	ECCD1H070CC	001 103 0271 9
C212	ECEA1HUR47	001 120 3249 8	C316	ECEA1VU100	001 120 3270 1	C906	ECCD1H180KC	001 103 0448 2
C213	△ ECKD1H223PF	001 103 1510 9	C319	ECKD1H103PF	001 103 1449 7	C907	ECKD1H103PF	001 103 1449 7
C214	ECFTD183KXL	001 108 0358 8	C320, C321	ECFTD223KXL	001 108 0342 6	C908	ECQM1H223JZ	001 106 0739 9
C215	ECKD1H103PF	001 103 1449 7	C502	ECEA1HUR22	001 120 3247 0	C909	ECKD1H103PF	001 103 1449 7
C216	ECEA0JU330	001 120 3162 4	C701	ECEA16V1000	001 120 2545 7	C910	ECEA25M4R7R	001 120 0838 5
C230	ECKD1H103PF	001 103 1449 7	C702	ECEA1CU222	001 120 3074 3	C912	ECKD1H103PF	001 103 1449 7
C251	ECQP1391JZ	001 106 1101 7	C703	ECEA1VU470	001 120 2843 0	C914	ECEA1EU3R3	001 120 2839 6
C301	ECQM1H332JZ	001 106 0774 6	C704	ECEA1EU101	001 120 2837 8	C918	ECKD1H103PF	001 103 1449 7
C302	ECKD1H103PF	001 103 1449 7	C705, C706	ECKD1H103PF	001 103 1449 7	C951	△ ECKD1H223PF	001 103 1510 9
C303	ECEA1EU101	001 120 2837 8	C707, C708	ECKD1H103PF	001 103 1449 7	C952	ECEA1HU010	001 120 2842 1
C305, C306	ECQM1H153JZ	001 106 0704 0	C711, C712	ECKD2H102ZF	001 103 7073 5	C953	ECQM1H223JZ	001 106 0739 9
C307, C308	ECEA1EU3R3	001 120 2839 6	C713, C714	ECEA1VU100	001 120 3270 1	C955	ECEA1HUR47	001 120 3249 8
C309, C310	ECEA1VU100	001 120 3270 1	C717	ECEA1VU100	001 120 3270 1			

Notes:

- Important safety notice:
Components identified by mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.
- -marked parts are used for black only, while -marked parts are for silver type only.

- Part other than ④-and ⑤-marked are use for both black and silver type.
- Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Code	Ref. No.	Part No	Part Code	Ref. No.	Part No.	Part Code
RESISTORS			R301	ERDS2T J471	001 152 2361 5	R905	ERDS2T J472	001 152 2362 4
R1	ERDS2T J104	001 152 2348 2	R302	ERDS2T J563	001 152 2446 1	R907	ERDS2T J102	001 152 2346 4
R2	ERDS2T J273	001 152 2436 3	R303	ERDS2T J393	001 152 2440 1	R908	ERDS2T J123	001 152 2424 1
R101	ERDS2T J222	001 152 2353 5	R304, R305	ERDS2T J564	001 152 2447 0	R910	ERDS2T J561	001 152 2364 2
R102	ERDS2T J104	001 152 2348 2	R306, R307	ERDS2T J104	001 152 2348 2	R913	ERDS2T J123	001 152 2424 1
R103	ERDS2T J822	001 152 2455 0	R308	ERDS2TKF1502	001 151 4792 3	R915	ERDS2T J103	001 152 2347 3
R104	ERDS2T J182	001 152 2352 6	R309	ERDS2T J102	001 152 2346 4	R916	ERDS2T J682	001 152 2365 1
R105	ERDS2T J155	001 152 2766 8	R310, R311	ERDS2T J274	001 152 2437 2	R918	ERDS2T J102	001 152 2346 4
R106	ERDS2T J102	001 152 2346 4	R312	ERDS2T J274	001 152 2437 2	R919, R922	ERDS2T J222	001 152 2353 5
R107	ERDS2T J331	001 152 2356 2	R313	ERDS2T J103	001 152 2347 3	R923	ERDS2T J473	001 152 2363 3
R108	ERDS2T J333	001 152 2358 0	R315	ERDS2T J393	001 152 2440 7	R935	ERDS2T J682	001 152 2365 1
R109	ERDS2T J103	001 152 2347 3	R316	ERDS2T J183	001 152 2429 2	R951	ERDS2T J102	001 152 2346 4
R110, R111	ERDS2T J682	001 152 2365 1	R321, R322	ERDS2T J104	001 152 2348 2	R952	ERDS2T J332	001 152 2357 1
R112	ERDS2T J104	001 152 2348 2	R323	ERDS2T J561	001 152 2364 2	R953	ERDS2T J123	001 152 2424 1
R113	ERDS2T J473	001 152 2363 3	R324	ERDS2T J564	001 152 2447 0	R954	ERDS2T J102	001 152 2346 4
R114	ERDS2T J101	001 152 2421 0	R333	ERDS2T J473	001 152 2363 3	R955	ERDS2T J822	001 152 2455 0
R115	ERDS2T J473	001 152 2363 3	R334	ERDS2T J274	001 152 2437 2	CAPACITORS		
R116	ERDS2T J332	001 152 2357 1	R501	ERDS2T J103	001 152 2347 3	C1	ECEA1EU3R3	001 120 2839 6
R117	ERDS2T J102	001 152 2346 4	R505, R506	ERDS2T J155	001 152 2766 8	C2	ECKD1H103PF	001 103 1449 7
R118	ERDS2T J221	001 152 2431 8	R601	ERDS2T J332	001 152 2357 1	C101	ECQM1H223JZ	001 106 0739 9
R119	ERDS2T J272	001 152 2354 4	R602	ERDS2T J223	001 152 2432 7	C102	ECEA1EU101	001 120 2837 8
R121	ERDS2T J332	001 152 2349 0	R603	ERDS2T J331	001 152 2356 2	C103	ECQM1H102JZ	001 106 0661 4
R122, R123	ERDS2T J331	001 152 2356 2	R604	ERDS2T J332	001 152 2357 1	C104, C105	ECKD1H103PF	001 103 1449 7
R125	ERDS2T J102	001 152 2346 4	R605	ERDS2T J101	001 152 2421 0	C106	ECCD1H070CC	001 103 0271 9
R126	ERDS2T J472	001 152 2362 4	R606	ERDS2T J102	001 152 2346 4	C107	ECCD1H101K	001 103 0341 2
R201	ERDS2T J104	001 152 2348 2	R607, R608	ERDS2T J332	001 152 2357 1	C108	ECEA1EU101	001 120 2837 8
R202	ERDS2T J222	001 152 2353 5	R609	ERDS2T J223	001 152 2432 7	C109	ECEA1HUR22	001 120 3247 0
R203	ERDS2T J473	001 152 2363 3	R610	ERDS2T J101	001 152 2421 0	C110	ECEA1EU4R7	001 120 2840 3
R204	ERDS2T J563	001 152 2446 1	R611	ERDS2T J102	001 152 2346 4	C111, C112	ECKD1H103PF	001 103 1449 7
R205	ERDS2T J104	001 152 2348 2	R612	ERDS2T J331	001 152 2356 2	C113, C114	ECKD1H103PF	001 103 1449 7
R206	ERDS2T J101	001 152 2421 0	R613, R614	ERDS2T J332	001 152 2357 1	C115	ECKD1H103PF	001 103 1449 7
R208	ERDS2T J273	001 152 2436 3	R701	ERD25F J221	001 152 0260 7	C116	ECQM1H102JZ	001 106 0661 4
R209	ERDS2T J102	001 152 2346 4	R702	ERDS2T J152	001 152 2350 8	C117, C118	ECKD1H103PF	001 103 1449 7
R210	ERDS2T J104	001 152 2348 2	R703	ERDS2T J222	001 152 2353 5	C119, C120	ECKD1H103PF	001 103 1449 7
R211	ERDS2T J222	001 152 2353 5	R704, R705	ERDS2T J822	001 152 2455 0	C121	ECFTD223KXL	001 108 0342 6
R212	ERDS2T J473	001 152 2363 3	R706	ERDS2T J102	001 152 2346 4	C122	ECEA0JU471	001 120 2924 0
R221	ERDS2T J101	001 152 2421 0	R707	ERDS2T J473	001 152 2363 3	C130	RCBS1H180JCY	001 103 5591 6
R222, R223	ERDS2T J473	001 152 2363 3	R708, R709	ERDS2T J104	001 152 2348 2	C202	ECQM1H473JZ	001 106 0810 9
R251	ERDS2T J473	001 152 2363 3	R710	ERDS1F J102	001 152 2614 3	C203	ECCD1H150KC	001 103 0410 6
R252, R253	ERDS2T J182	001 152 2352 6	R721	ERDS2T J155	001 152 2766 8	C204	ECQP1471JZ	001 106 1107 1
R254	ERDS2T J223	001 152 2432 7	R722	ERDS2T J331	001 152 2356 2	C206	ECKD1H103PF	001 103 1449 7
R256	ERDS2T J103	001 152 2347 3	R723	ERDS2T J473	001 152 2363 3	C207	RCBS1H8R2KCY	001 103 5644 0
			R725	ERDS2T J331	001 152 2356 2			

Ref. No.	Part No.	Part Code	Description	Ref. No.	Part No.	Part Code	Description
INTEGRATED CIRCUITS				D705, D706	MA140-M	001 032 7220 6	D10DE, S1
IC101	AN7274NS	001 060 8244 6	I.C., FM 1F/AM	D707, D708	MA165	001 032 0494 0	D10DE
IC102	AN278	001 060 0102 1	I.C., FM 1F	D713	LN846RP-C	001 032 8341 4	LED
IC301	AN7472S	001 060 8249 1	I.C., MPX	D714	LN446YP	001 032 3834 8	L.E.D
IC303	AN6554F	001 060 2992 1	I.C., AMP	D901	MA162A	001 032 0493 1	D10DE
IC901	UPD1714G528	001 061 1044 5	INTEGRATED CIRCUIT	D906, D907	MA165	001 032 0494 0	D10DE
IC902	MN1219	001 060 6060 0	INTEGRATED CIRCUIT	D908, D909	MA165	001 032 0494 0	D10DE
TRANSISTORS				D910, D911	MA165	001 032 0494 0	D10DE
Q101	2SC2787L	001 030 2508 3	TRANSISTOR	D912, D915	MA165	001 032 0494 0	D10DE
Q102	2SC3311A-Q	001 030 5279 5	TRANSISTOR	D916, D917	MA165	001 032 0494 0	D10DE
Q103, Q104	2SA1309Q	001 030 4058 0	TRANSISTOR	D918, D919	MA165	001 032 0494 0	D10DE
Q201	2SA1309Q	001 030 4058 0	TRANSISTOR	D920, D922	MA165	001 032 0494 0	D10DE
Q251, Q252	2SC3311A-Q	001 030 5279 5	TRANSISTOR	D926, D928	MA165	001 032 0494 0	D10DE
Q253	2SC3311A-Q	001 030 5279 5	TRANSISTOR	D929, D930	MA165	001 032 0494 0	D10DE
Q255	2SA1309Q	001 030 4058 0	TRANSISTOR	D932	MA4091-M	001 032 7213 5	D10DE
Q301	2SC3311A-Q	001 030 5279 5	TRANSISTOR	D935	MA165	001 032 0494 0	D10DE
Q701, Q702	2SD592Q	001 030 2677 7	TRANSISTOR	D951	MA4043M	001 032 5574 1	D10DE
Q703	2SC3311A-Q	001 030 5279 5	TRANSISTOR	D952	MA165	001 032 0494 0	D10DE
Q704	2SK301	001 030 2428 2	TRANSISTOR	VARIABLE RESISTORS			
Q705, Q706	2SC3311A-Q	001 030 5279 5	TRANSISTOR	VR101, VR301	QVNB3A00B104	001 180 1594 6	VARIABLE RESISTOR
Q707	2SA1309Q	001 030 4058 0	TRANSISTOR	VARIABLE CAPACITORS			
Q708, Q711	2SC3311A-Q	001 030 5279 5	TRANSISTOR	CT201	SVCTZ03T110F	001 142 0370 8	VARIABLE CAPACITOR
Q716, Q717	2SC3311A-Q	001 030 5279 5	TRANSISTOR	CT251	SVCTZ03R200F	001 142 0369 1	TRIMMER
Q902, Q903	2SC1310-G	001 030 6080 4	TRANSISTOR	THERMISTORS AND VARISTORS			
Q904	2SA1309Q	001 030 4058 0	TRANSISTOR	TH101, TH102	ERT02ZHL332S	001 191 0186 1	THERMISTOR
Q905, Q951	2SC3311A-Q	001 030 5279 5	TRANSISTOR	COILS AND TRANSFORMERS			
Q952	2SC3311A-Q	001 030 5279 5	TRANSISTOR	L101	ELEPK101KA	001 211 0855 8	CHOKE COIL
DIODES				L202	SLA2B3-P	001 211 2243 6	ANTENNA COIL
D101, D102	MA165	001 032 0494 0	D10DE	L203	SL02B9R-P	001 211 2783 9	OSCILLATOR COIL
D103, D104	MA165	001 032 0494 0	D10DE	L251	SLA1B7R-P	001 211 2779 5	ANTENNA COIL
D201	KV1260Z	001 032 7237 7	D10DE	L252	SL01B5-P	001 211 2782 0	OSCILLATOR COIL
D202, D203	MA165	001 032 0494 0	D10DE	L902	RLQY25S5-0	001 210 1383 0	CHOKE COIL
D205, D301	MA165	001 032 0494 0	D10DE	T101	SL14B520-Z	001 211 0628 7	I.F. TRANSFORMER
D302, D304	MA165	001 032 0494 0	D10DE	T102	SL14B521-Z	001 211 0629 6	I.F. TRANSFORMER
D305	MA4082M	001 032 4955 6	D10DE				
D701, D702 Δ	SVD1SR35200A	001 032 3951 4	RECTIFIER				
D703 Δ	SVD1SR35200A	001 032 3951 4	RECTIFIER				
D704	MA4062-M	001 032 7211 7	D10DE				

Ref. No.	Part
T201	SL12B1
T701 Δ (EX, EF, EB)	SLT5K2
T701 Δ (EK)	SLT5K2
FILTERS	
CF101	SVFE1C
CF102	SVFE1C
CF103, CF104	SVFE1C
CF201	SVFSF
OSCILLATORS	
X301	SVQ43
DISPLAYS	
ICD	SALHL
FRONT PACKS	
FE	SNVFE
LAMPS	
PL1	XAMS15
FUSES	
F1 Δ (FK)	XBA2C
F1 Δ (EX, EF, EB)	XBA2C
SWITCHES	
S1, S2	SSG13
S3, S4	SSG13
S5, S6	SSG13
S7, S8	SSG13
S9, S10	SSG13
S11, S12	SSG13
S13, S14	SSG13
S15, S16	SSG13
S17, S18	SSG13
S19, S20	SSG13
S701 Δ	SSH121
RELAYS	
C125	ECKD1H
RL201	SFDYG
CABINET AND CHASSIS	
1 K	SGWTG
1 S	SGWTG
1-1 K	SGU448
1-1 S	SGU448
2 K	SBC809
2 S	SBC809
3	SLW301
4 S	SBC726
4 K	SBC726
5 K	SBC810
5 S	SBC810
6 S	SBC812
6 K	SBC812

Tolerance
J : ±5%
F : ±1%
G : ±2%
K : ±10%

Tolerance
C : ±0.25pF
J : ±5%
K : ±10%
Z : ±80%
-20%
P : +100%
-0%
M : ±20%
D : ±0.5pF
G : ±2%

Ref. No.	Part No.	Part Code	Ref. No.	Part No.	Part Code	Ref. No.	Part No.	Part Code
C208	RCBS1H880JLY	001 103 5640 4	C311	ECQP2A391GZ	001 106 4422 1	C721	ECQV1H104JZ	001 106 2571 7
C209	ECKD1H103PF	001 103 1449 7	C312	ECEA1VU100	001 120 3270 1	C901	ECKD1H103PF	001 103 1449 7
C210	ECEA0JU330	001 120 3162 4	C313	ECEA1HUR47	001 120 3249 8	C904	ECEA0JU471	001 120 2924 0
C211	ECKD1H103PF	001 103 1449 7	C314, C315	ECEA1HUR22	001 120 3247 0	C905	ECCD1H070CC	001 103 0271 9
C212	ECEA1HUR47	001 120 3249 8	C316	ECEA1VU100	001 120 3270 1	C906	ECCD1H180KC	001 103 0448 2
C213	ECKD1H223PF	001 103 1510 9	C319	ECKD1H103PF	001 103 1449 7	C907	ECKD1H103PF	001 103 1449 7
C214	ECFTD183KXL	001 108 0358 8	C320, C321	ECFTD223KXL	001 108 0342 6	C908	ECQM1H223JZ	001 106 0739 9
C215	ECKD1H103PF	001 103 1449 7	C502	ECEA1HUR22	001 120 3247 0	C909	ECKD1H103PF	001 103 1449 7
C216	ECEA0JU330	001 120 3162 4	C701	ECEA16V1000	001 120 2545 7	C910	ECEA25M4R7R	001 120 0838 5
C230	ECKD1H103PF	001 103 1449 7	C702	ECEA1CU222	001 120 3074 3	C912	ECKD1H103PF	001 103 1449 7
C251	ECQP1391JZ	001 106 1101 7	C703	ECEA1VU470	001 120 2843 0	C914	ECEA1EU3R3	001 120 2839 6
C301	ECQM1H332JZ	001 106 0774 6	C704	ECEA1EU101	001 120 2837 8	C918	ECKD1H103PF	001 103 1449 7
C302	ECKD1H103PF	001 103 1449 7	C705, C706	ECKD1H103PF	001 103 1449 7	C951	ECKD1H223PF	001 103 1510 9
C303	ECEA1EU101	001 120 2837 8	C707, C708	ECKD1H103PF	001 103 1449 7	C952	ECEA1HU010	001 120 2842 1
C305, C306	ECQM1H153JZ	001 106 0704 0	C711, C712	ECKD2H102ZF	001 103 7073 5	C953	ECQM1H223JZ	001 106 0739 9
C307, C308	ECEA1EU3R3	001 120 2839 6	C713, C714	ECEA1VU100	001 120 3270 1	C955	ECEA1HUR47	001 120 3249 8
C309, C310	ECEA1VU100	001 120 3270 1	C717	ECEA1VU100	001 120 3270 1			

REPLACEMENT PARTS LIST

Notes: • Important safety notice:

Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

• $\textcircled{K}$ -marked parts are used for black only, while $\textcircled{S}$ -marked parts are for silver type only.

• Part other than $\textcircled{K}$ -and $\textcircled{S}$ -marked are use for both black and silver type.

• Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.

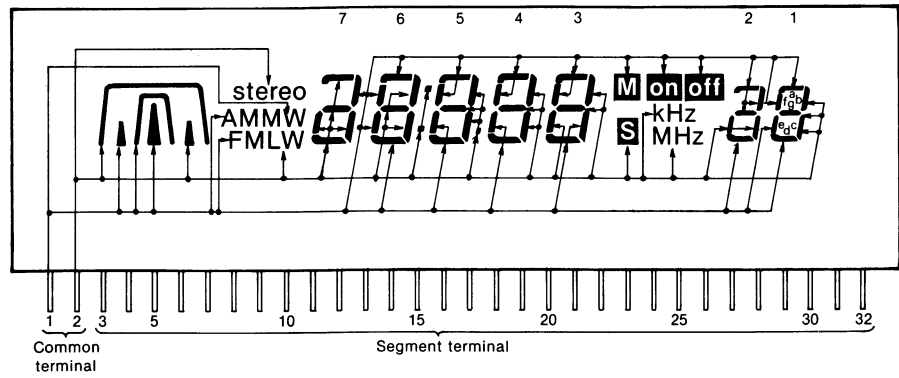
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001 108 0342 6
001 120 2924 0
001 103 5591 6
001 106 0810 9
001 103 0410 6
001 106 1107 1
001 103 1449 7
001 103 5644 0

Ref. No.	Part No.	Part Code	Description	Ref. No.	Part No.	Part Code	Description
INTEGRATED CIRCUITS				D705, D706	MA4140-M	001 032 7220 6	DIODE, SI
IC101	AN7274NS	001 060 8244 6	I.C., FM IF/AM	D707, D708	MA165	001 032 0494 0	DIODE
IC102	AN278	001 060 0102 1	I.C., FM IF	D713	LN846RP-C	001 032 8341 4	LED
IC301	AN7472S	001 060 8249 1	I.C., MPX	D714	LN446YP	001 032 3834 8	L.E.D
IC303	AN6554F	001 060 2992 1	I.C., AMP	D901	MA162A	001 032 0493 1	DIODE
IC901	UPD1714G528	001 061 1044 5	INTEGRATED CIRCUIT	D906, D907	MA165	001 032 0494 0	DIODE
IC902	MN1219	001 060 6060 0	INTEGRATED CIRCUIT	D908, D909	MA165	001 032 0494 0	DIODE
TRANSISTORS				D910, D911	MA165	001 032 0494 0	DIODE
Q101	2SC2787L	001 030 2508 3	TRANSISTOR	D912, D915	MA165	001 032 0494 0	DIODE
Q102	2SC3311A-Q	001 030 5279 5	TRANSISTOR	D916, D917	MA165	001 032 0494 0	DIODE
Q103, Q104	2SA1309Q	001 030 4058 0	TRANSISTOR	D918, D919	MA165	001 032 0494 0	DIODE
Q201	2SA1309Q	001 030 4058 0	TRANSISTOR	D920, D922	MA165	001 032 0494 0	DIODE
Q251, Q252	2SC3311A-Q	001 030 5279 5	TRANSISTOR	D926, D928	MA165	001 032 0494 0	DIODE
Q253	2SC3311A-Q	001 030 5279 5	TRANSISTOR	D929, D930	MA165	001 032 0494 0	DIODE
Q255	2SA1309Q	001 030 4058 0	TRANSISTOR	D932	MA4091-M	001 032 7213 5	DIODE
Q301	2SC3311A-Q	001 030 5279 5	TRANSISTOR	D935	MA165	001 032 0494 0	DIODE
Q701, Q702	2SD592Q	001 030 2677 7	TRANSISTOR	D951	MA4043M	001 032 5574 1	DIODE
Q703	2SC3311A-Q	001 030 5279 5	TRANSISTOR	D952	MA165	001 032 0494 0	DIODE
Q704	2SK301	001 030 2428 2	TRANSISTOR	VARIABLE RESISTORS			
Q705, Q706	2SC3311A-Q	001 030 5279 5	TRANSISTOR	VR101, VR301	QVNB3A00B104	001 180 1594 6	VARIABLE RESISTOR
Q707	2SA1309Q	001 030 4058 0	TRANSISTOR	VARIABLE CAPACITORS			
Q708, Q711	2SC3311A-Q	001 030 5279 5	TRANSISTOR	CT201	SVCTZ03T110F	001 142 0370 8	VARIABLE CAPACITOR
Q716, Q717	2SC3311A-Q	001 030 5279 5	TRANSISTOR	CT251	SVCTZ03R200F	001 142 0369 1	TRIMMER
Q902, Q903	2SC1310-G	001 030 6080 4	TRANSISTOR	THERMISTORS AND VARISTORS			
Q904	2SA1309Q	001 030 4058 0	TRANSISTOR	TH101, TH102	ERTD2ZHL332S	001 191 0186 1	THERMISTOR
Q905, Q951	2SC3311A-Q	001 030 5279 5	TRANSISTOR	COILS AND TRANSFORMERS			
Q952	2SC3311A-Q	001 030 5279 5	TRANSISTOR	L101	ELEPK101KA	001 211 0855 8	CHOKE COIL
DIODES				L202	SLA2B3-P	001 211 2249 6	ANTENNA COIL
D101, D102	MA165	001 032 0494 0	DIODE	L203	SL02B9R-P	001 211 2783 9	OSCILLATOR COIL
D103, D104	MA165	001 032 0494 0	DIODE	L251	SLA1B7R-P	001 211 2779 5	ANTENNA COIL
D201	KV1260Z	001 032 7237 7	DIODE	L252	SL01B5-P	001 211 2782 0	OSCILLATOR COIL
D202, D203	MA165	001 032 0494 0	DIODE	L902	RLQY25S5-0	001 210 1383 0	CHOKE COIL
D205, D301	MA165	001 032 0494 0	DIODE	T101	SL14B520-Z	001 211 0628 7	I.F. TRANSFORMER
D302, D304	MA165	001 032 0494 0	DIODE	T102	SL14B521-Z	001 211 0629 6	I.F. TRANSFORMER
D305	MA4082M	001 032 4955 6	DIODE				
D701, D702 Δ	SVD1SR35200A	001 032 3951 4	RECTIFIER				
D703 Δ	SVD1SR35200A	001 032 3951 4	RECTIFIER				
D704	MA4062-M	001 032 7211 7	DIODE				

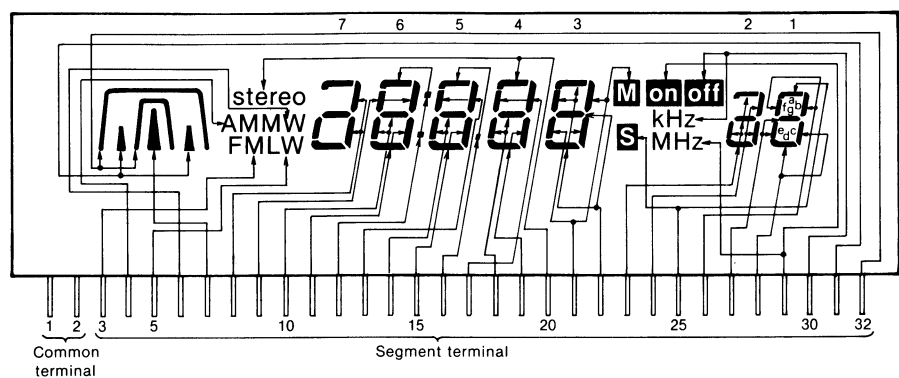
Ref. No.	Part No.	Part Code	Description	Ref. No.	Part No.	Part Code	Description
T201	SL12B104-M	001 215 2837 2	I.F. TRANSFORMER	7	$\textcircled{K}$	SGX7733	016 846 2908 0 ORNAMENT
T701 Δ	SLT5K227	001 202 7945 0	POWER TRANSFORMER	7	$\textcircled{S}$	SGX7733-1	016 846 2497 8 ORNAMENT
(EX, EF, EB)				8	$\textcircled{K}$	SGX7830	016 846 3216 7 ORNAMENT
T701 Δ	SLT5K229	001 202 7912 9	POWER TRANSFORMER	8	$\textcircled{S}$	SGX7830-1	016 846 3429 6 ORNAMENT
(EX)				9		SUW3002	016 650 5184 8 BRACKET
FILTERS				10	$\textcircled{S}$	SBC666	016 702 5545 6 BUTTON, POWER
CF101	SVFE107M22-M	001 241 0241 4	CERAMIC FILTER	10	$\textcircled{K}$	SBC666-5	016 702 6679 9 BUTTON, POWER
CF102	SVFE107MX2-E	001 241 1152 0	CERAMIC FILTER	11	$\textcircled{K}$	SKC1710K99	016 800 2120 2 CABINET
CF103, CF104	SVFE107M22-M	001 241 0241 4	CERAMIC FILTER	11	$\textcircled{S}$	SKC1710S98	016 800 2121 1 CABINET
CF201	SVFSFZ450F7L	001 241 0429 4	CERAMIC FILTER	12		SHR9795	016 652 0597 1 PLASTIC SPACER
OSCILLATORS				13		SOU267	016 842 0869 8 GALSS. TRANSPARENT PLATE
XS01	SVQ430J452-0	001 250 1406 3	CRYSTAL OSC.	14		SHR415	016 652 0088 7 LOCK PIN
DISPLAYS				15		SMP407	016 632 1783 9 ANGLE
LCD	SALHLC9196-2	001 088 0276 8	LIQUID CRYSTAL DISPLAY	16		SJT347	003 410 1830 8 FUSE HOLDER
FRONT PACKS				17		SHG1639	016 653 0657 1 RUBBER PARTS
FE	SNVFE407G29	001 141 0K30 7	FRONT END PACK	18	Δ	SJS9236	003 403 4660 7 AC SOCKET
LAMPS				19		SJF8615N	003 410 7262 4 TERMINAL BOARD
PL1	XAMS15S150	002 351 0974 3	LAMP	20		SUS803	016 726 0633 5 COIL SPRING
FUSES				21		SHE181	016 918 0332 7 SPACER
F1 $\textcircled{K}$	XBA2C05TB0	002 380 1350 2	FUSE, 10.5A 250V, 10.5A250	22		SHE185	016 918 0330 9 SPACER
FEK1 $\textcircled{K}$	XBA2C05TB0	002 380 0995 3	FUSE, 10.5A 250V, 10.5A250	23		SGP6373A	016 840 6547 9 REAR PANEL
F1 (EX, EF, EB)	XBA2C05TB0	002 380 0995 3	FUSE, 10.5A 250V, 10.5A250	24		SKL304	016 828 0315 9 LEG, CASTER
SWITCHES				25		XTB3+6FFZ	005 501 1590 3 SCREW
S1, S2	SSG13	003 435 2951 9	SW. CH1/CH2	26		XTB3+12JFZ	005 501 2078 0 TAPPING SCREW
S3, S4	SSG13	003 435 2951 9	SW. CH3/CH4	27		XTB3+10G	005 501 2647 9 SCREW
S5, S6	SSG13	003 435 2951 9	SW. CH5/CH6	28	$\textcircled{S}$	SNE2129	005 500 8058 5 SCREW
S7, S8	SSG13	003 435 2951 9	SW. CH7/CH8	28	$\textcircled{K}$	SNE2129-1	005 500 7938 6 SCREW
S9, S10	SSG13	003 435 2951 9	SW. CH9/CH10	29		XTBS3+16F1	005 501 2606 8 TAPPING SCREW
S11, S12	SSG13	003 435 2951 9	SW. MEMO/UP	30		XTBS3+20F1	005 501 2522 1 SCREW
S13, S14	SSG13	003 435 2951 9	SW. DOWN/MODE	31		XTBS3+8JFZ1	005 501 2523 0 SCREW
S15, S16	SSG13	003 435 2951 9	SW. IF/SCAN	32		XTW3+8TFR	005 501 2602 2 SCREW
S17, S18	SSG13	003 435 2951 9	SW. SIGNAL/FM	33		XTW3+8T	005 501 1358 9 SCREW
S19, S20	SSG13	003 435 2951 9	SW. LW/AM	34		SJT30440LX-V	003 410 6076 8 LUG TERMINAL
S701 Δ	SSH1214	003 435 5649 0	SW., POWER	35		SJT30840LX-V	003 410 6150 5 LUG TERMINAL
RELAYS				PACKINGS			
C125	ECKD1H103PF	001 103 1449 7	CERAMIC CAPACITOR	P1		SPG5952	016 971 5105 5 CARTON BOX
RL201	SFDYG5A237P	003 450 2713 4	RELAY	P1 (EX, EK, EB)		SPG5953	016 971 5144 8 CARTON BOX
CABINET AND CHASSIS				P1 (EF)			
1 $\textcircled{K}$	SGWT655AL-KE	016 840 7882 3	FRONT PANEL (K)	P2		SPS4550-7	016 977 3097 6 PAD
1 $\textcircled{S}$	SGWT655AL-SE	016 840 8001 0	FRONT PANEL (S)	P3		SPS4551-4	016 977 2905 3 PAD
1-1 $\textcircled{S}$	SGU446-10	016 842 1720 4	FILTER	P4		SPS4552	016 977 1354 6 PAD
1-1 $\textcircled{K}$	SGU446-9	016 842 1676 1	FILTER	P5 $\textcircled{S}$		SPP697	016 978 0194 3 PROTECTION COVER
2 $\textcircled{K}$	SBC809	016 702 6446 4	BUTTON	P5 $\textcircled{K}$		SPP725	016 978 0208 4 POLYETHYLENE SHEET
2 $\textcircled{S}$	SBC809-1	016 702 6447 3	BUTTON	P6		XZB24X40C04	016 978 0232 4 POLYETHYLENE COVER
3	SUW3011	016 650 5196 4	BRACKET	ACCESSORIES			
4 $\textcircled{S}$	SBC726-1A	016 702 1324 3	BUTTON	A1 Δ		SFDAC05E03	003 490 4809 5 POWER CORD
4 $\textcircled{K}$	SBC726A	016 702 1311 8	BUTTON	1 (EX, EF, EB)		SFDAC05G02	003

DESCRIPTION OF LCD PANEL

COMMON



SEGMENT

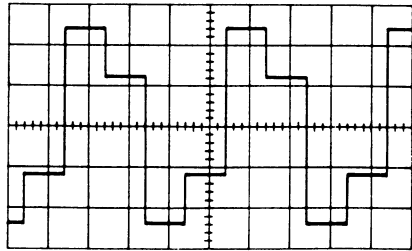


No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COM1	COM1	—	FM	AM	—	MW	▲	7b	6f	6e	6d	6a	5f	5e	5d	5a
COM2	—	COM2	—	—	LW	—	7adeg	7c	6b	6g	6c	■	5b	5g	5c	■

No.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
COM1	4f	4e	4d	4a	M	3acdf	2adg	2b	1a	1f	1e	1d	on	off	▲ left	□
COM2	4b	4g	4c	stereo	3be	3g	2e	2c	S	1b	1g	1c	MHz	kHz	right ▲	□

< Segment ON >

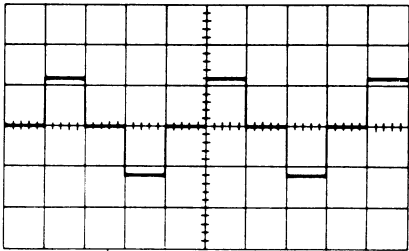
Pin ① or ② of LCD and each segment terminal.



2V AC/DIV, 5m sec/cm

< Segment OFF >

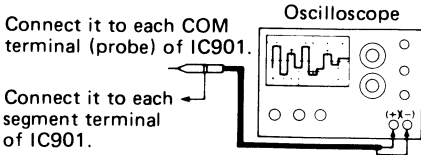
Pin ① or ② of LCD and each segment terminal.



2V AC/DIV, 5m sec/cm

Each segment waveform measuring method

Note: Potential difference from COM terminal waveform is measured for each segment output waveform. So, do not connect the earth to other equipment on the oscilloscope side. If the earth is connected, IC901 will break down.



SCHEMATIC DIAGRAM

Note 1:

- S1~S10 : Preset tuning switch.
[S1—CH 1, S2—CH 2, S3—CH 3, S4—CH 4
S5—CH 5, S6—CH 6, S7—CH 7, S8—CH 8
S9—CH 9, S10—CH 0]
- S11, S12 : Tuning switch. (tuning)
[S11—down (tuning to lower frequency.)
S12—up (tuning to higher frequency.)]
- S13 : Memory switch. (memory)
(memory ↔ auto memory)
- S14 : FM mode selector. (FM mode)
(auto ↔ mono)
- S15 : FM IF band selector. (IF band)
(normal ↔ narrow)
- S16 : Scan level selector. (scan level)
(dB ↔ level)
- S17 : FM signal-strength indication button. (signal)
- S18~S20 : Band selector. (band selector)
(S18—FM, S19—LW, S20—MW)
- S21, S22 : Band selector. (band selector)
(S21—FM, S22—AM)
- S701 : Power switch in "on" position. (power)
- S702 : Voltage selector switch in "240V" position.
([XA], [PA] and [PE] areas)

Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester. All voltage values shown in circuitry are DC voltage in FM signal (no signal) reception mode and "normal" mode of the FM IF band.

- * Figures in () stand for DC voltage in AM (MW) signal reception mode.
- * Figures in () stand for DC voltage in LW signal reception mode.
- * Figures in () stand for muting mode.
- * Figures in < > stand for DC voltage in "narrow" mode.
- — Positive voltage lines.
- FM signal □□□□→ FM OSC
- AM signal ■■■■→ AM OSC

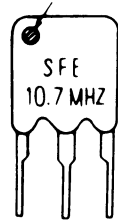
Important safety notice.
Components identified by Δ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

Part No.	Original Part No.	Supplyment Part No.
D901	MA150	MA162A

Note 2:

Use of ceramic filters in pairs
The ceramic filters (CF101~CF104) for FM-IF circuit are available in two ranks.
For this machine, be sure to use the ceramics of the same rank in a pair. At repairing and replacement, pay close attention to the diode (D901) for use as different diode must be used depending on each rank of the ceramic filters.

Color marking

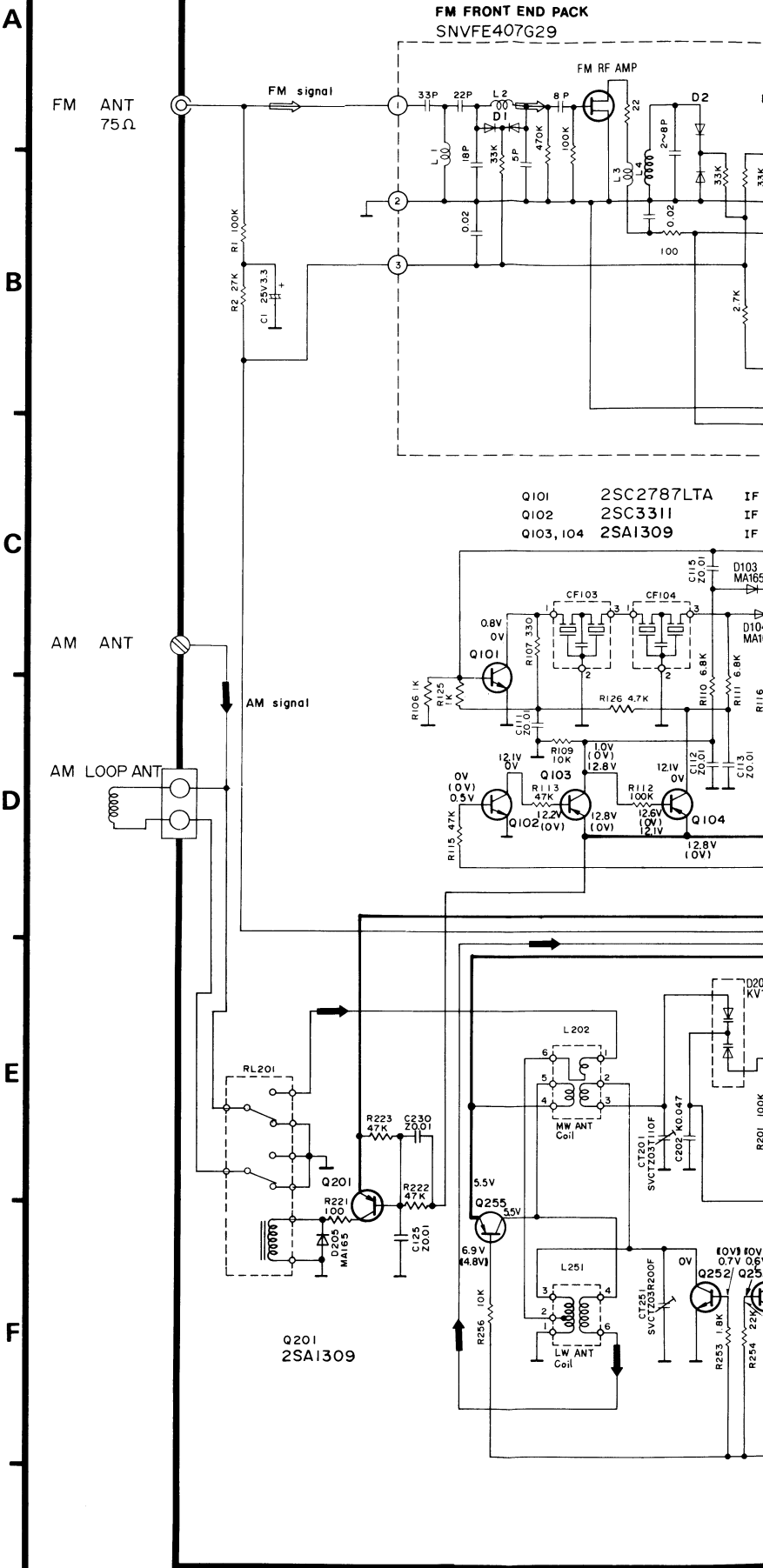


RANK (Color)	D901	CENTER FREQUENCY
Red	×	10.70MHz
Black	○	10.65MHz

Note: ○ mark: Diode is used.
× mark: Diode is not used.

(ST-G55AL only)

A MAIN CIRCUIT



SCHEMATIC DIAGRAM

Note 1:

- S1~S10 : Preset tuning switch.
[S1—CH1, S2—CH2, S3—CH3, S4—CH4
S5—CH5, S6—CH6, S7—CH7, S8—CH8
S9—CH9, S10—CH0]
- S11, S12 : Tuning switch. (tuning)
[S11—down (tuning to lower frequency.)
S12—up (tuning to higher frequency.)]
- S13 : Memory switch. (memory)
(memory ↔ auto memory)
- S14 : FM mode selector. (FM mode)
(auto ↔ mono)
- S15 : FM IF band selector. (IF band)
(normal ↔ narrow)
- S16 : Scan level selector. (scan level)
(dB ↔ level)
- S17 : FM signal-strength indication button. (signal)
- S18~S20 : Band selector. (band selector)
(S18—FM, S19—LW, S20—MW)
- S21, S22 : Band selector. (band selector)
(S21—FM, S22—AM)
- S701 : Power switch in "on" position. (power)
- S702 : Voltage selector switch in "240V" position.
([XA], [PA] and [PE] areas)

• Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester. All voltage values shown in circuitry are DC voltage in FM signal (no signal) reception mode and "normal" mode of the FM IF band.

* Figures in () stand for DC voltage in AM (MW) signal reception mode.

* Figures in (()) stand for DC voltage in LW signal reception mode.

* Figures in [] stand for muting mode.

* Figures in < > stand for DC voltage in "narrow" mode.

• — Positive voltage lines. — AF signal.

→ FM signal → FM OSC
→ AM signal → AM OSC

Important safety notice.

Components identified by Δ mark have special characteristics important for safety.

When replacing any of these components, use only manufacturer's specified parts.

Part No.	Original Part No.	Supplyment Part No.
D901	MA150	MA162A

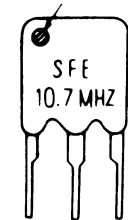
Note 2:

• Use of ceramic filters in pairs

The ceramic filters (CF101~CF104) for FM-IF circuit are available in two ranks.

For this machine, be sure to use the ceramics of the same rank in a pair. At repairing and replacement, pay close attention to the diode (D901) for use as different diode must be used depending on each rank of the ceramic filters.

Color marking

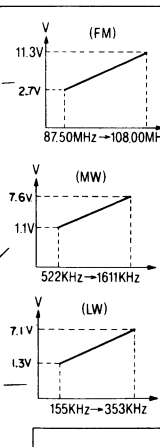
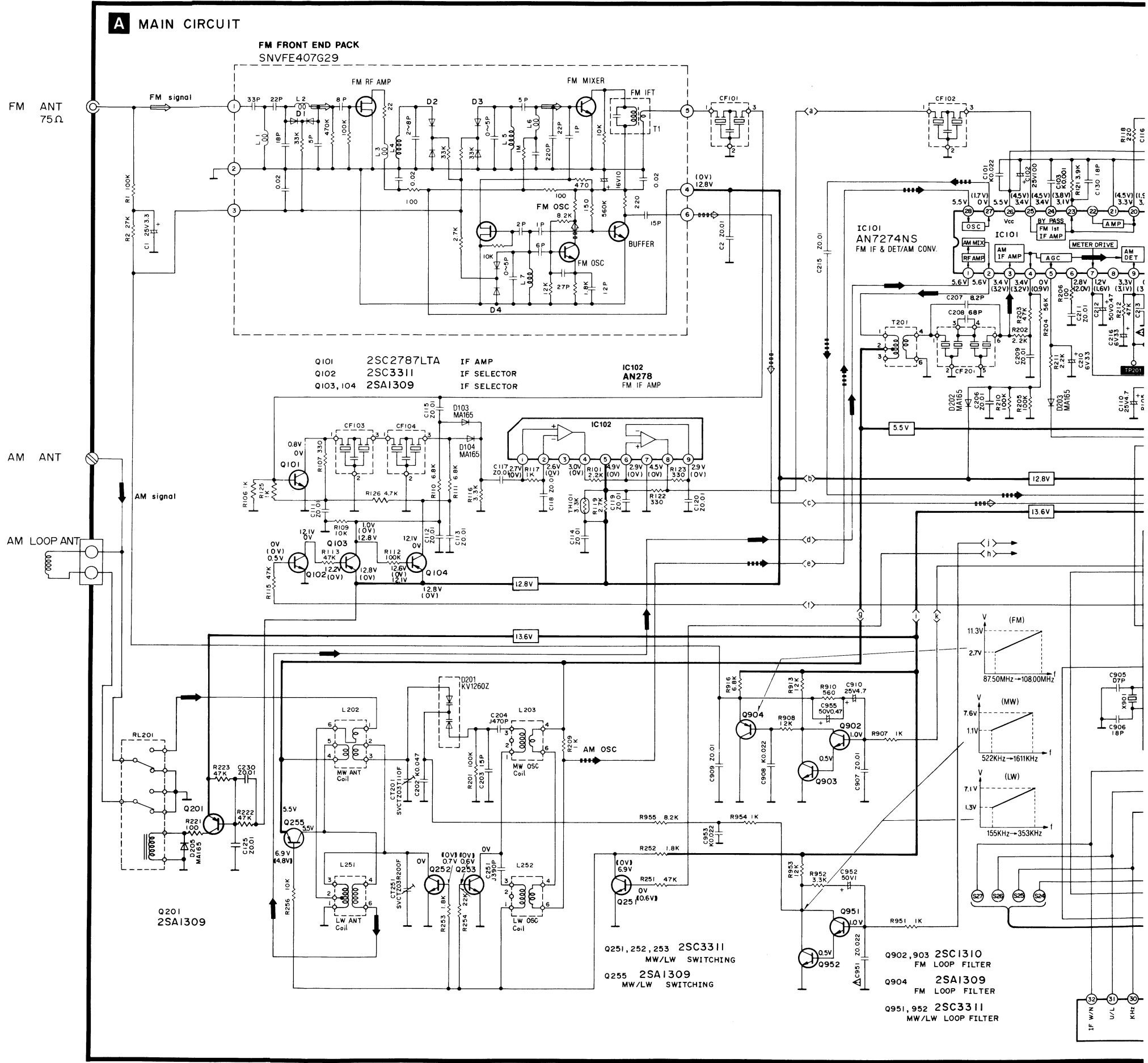


RANK (Color)	D901	CENTER FREQUENCY
Red	×	10.70MHz
Black	○	10.65MHz

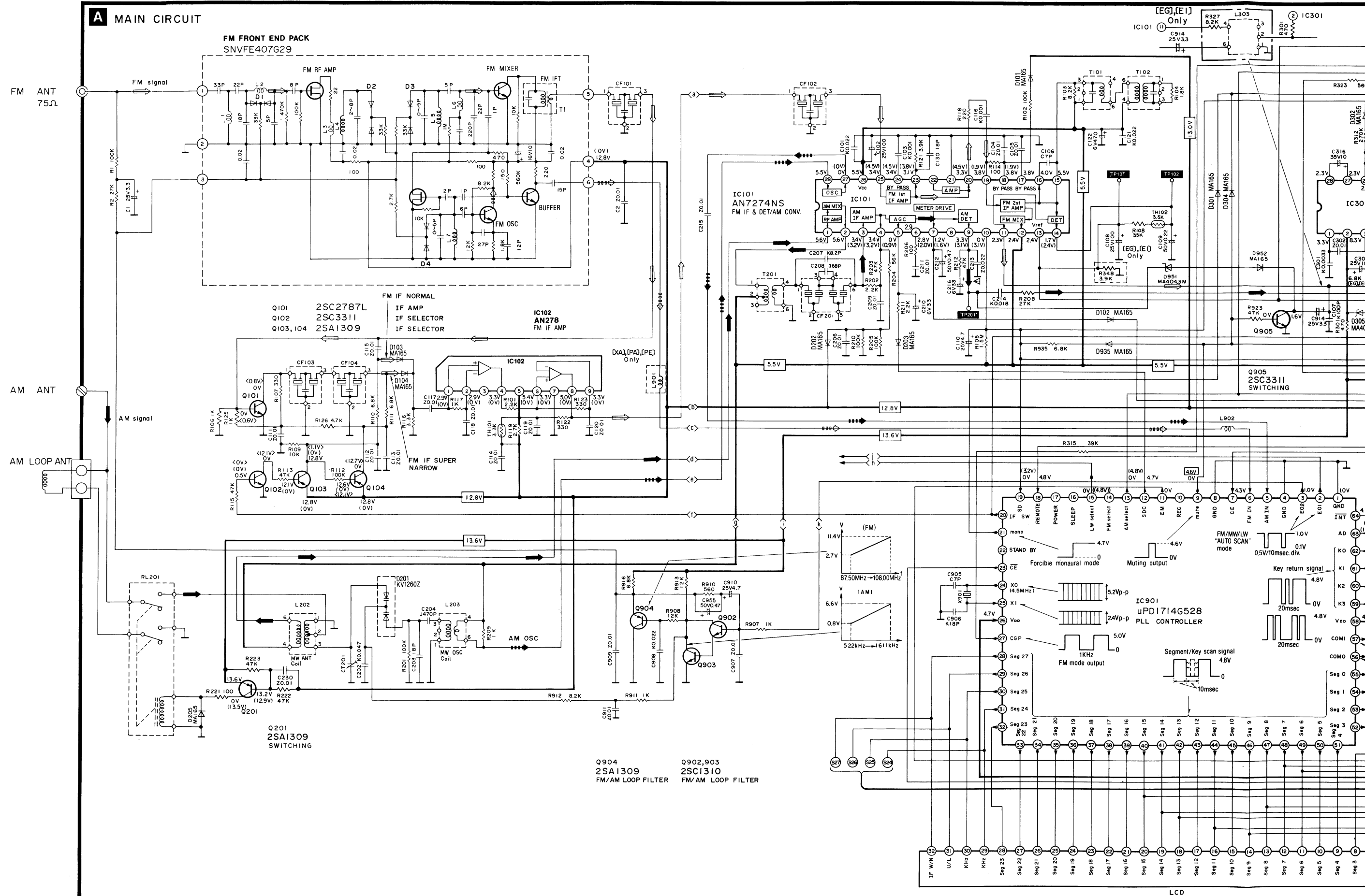
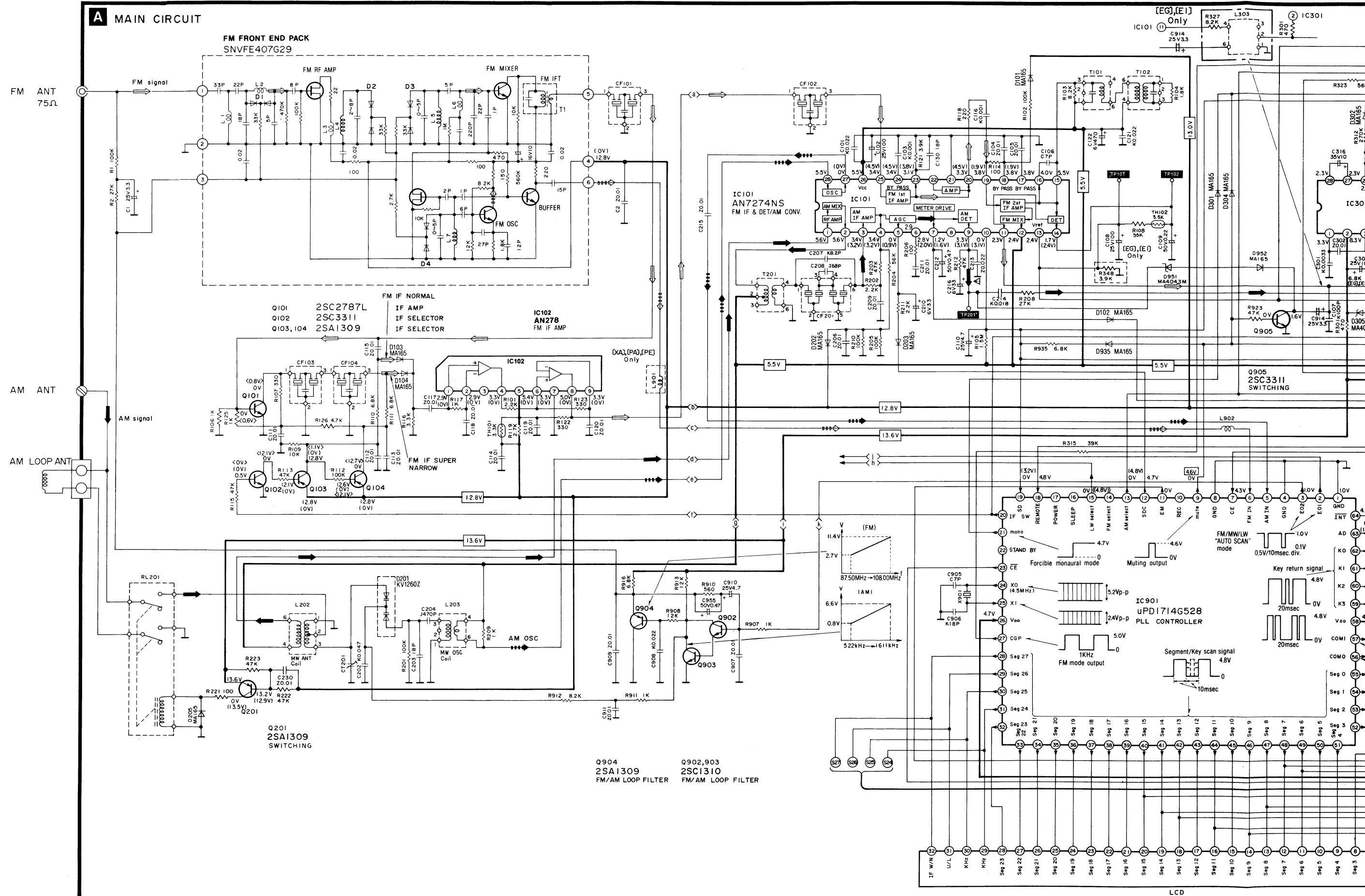
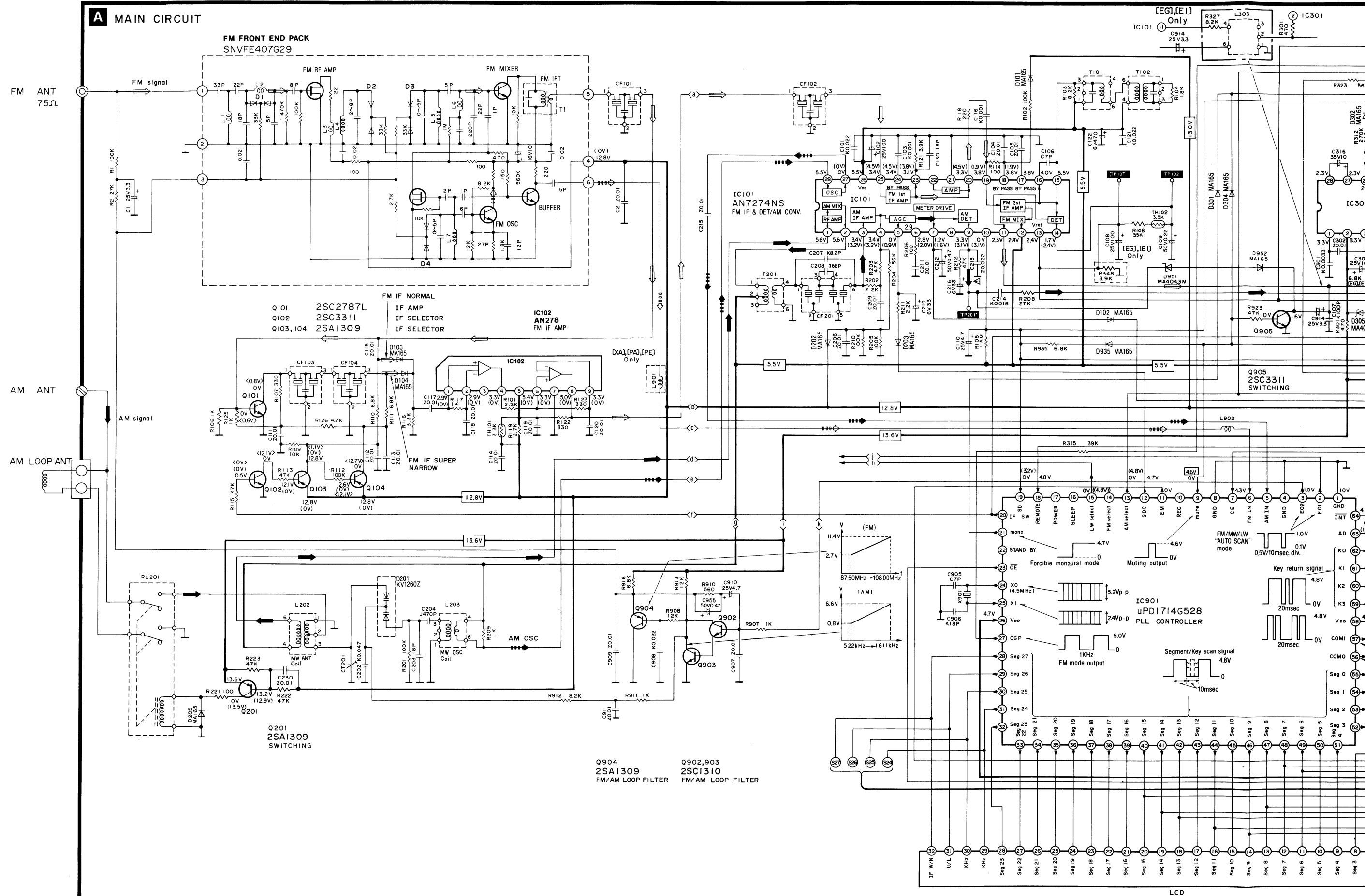
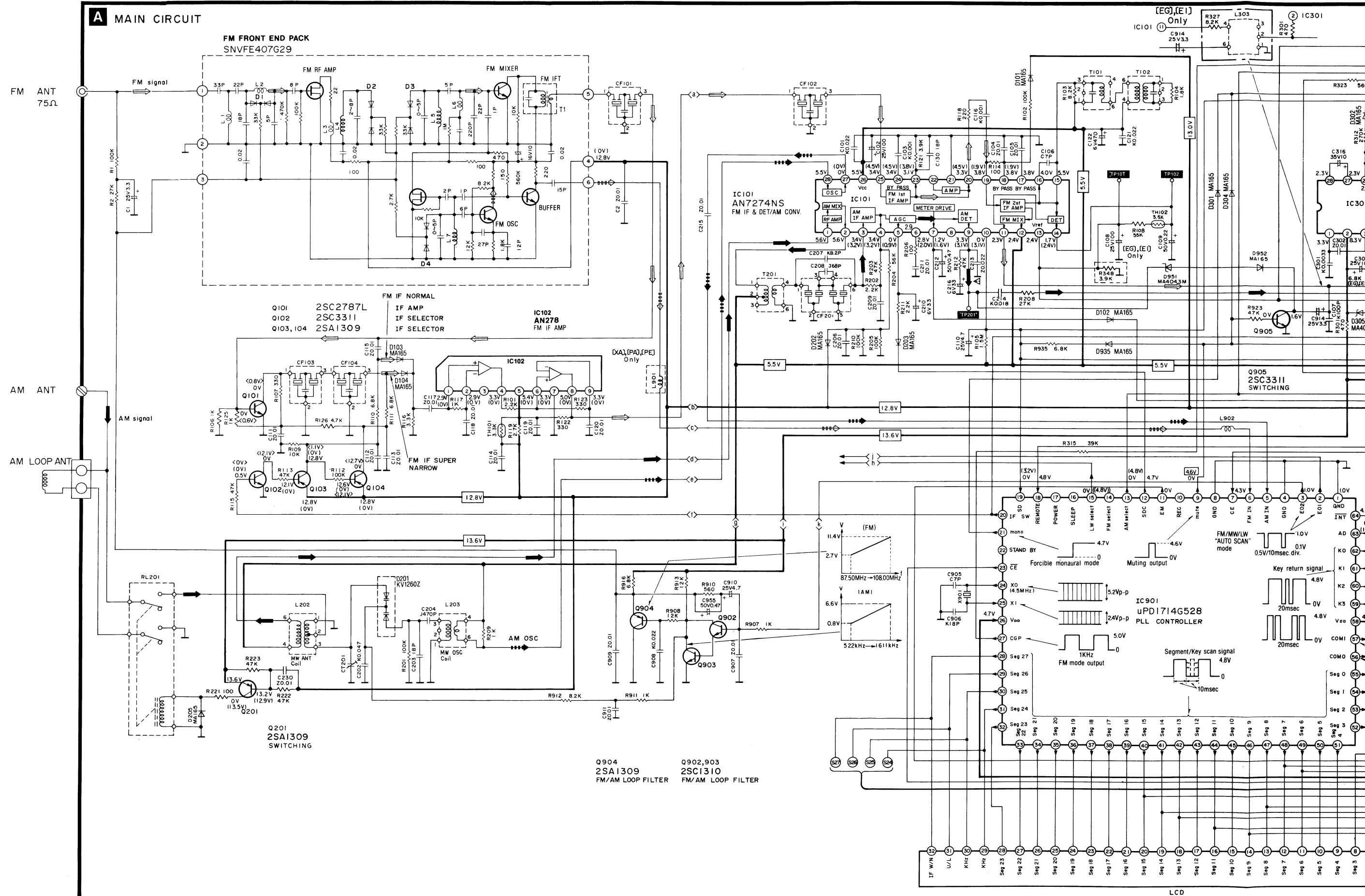
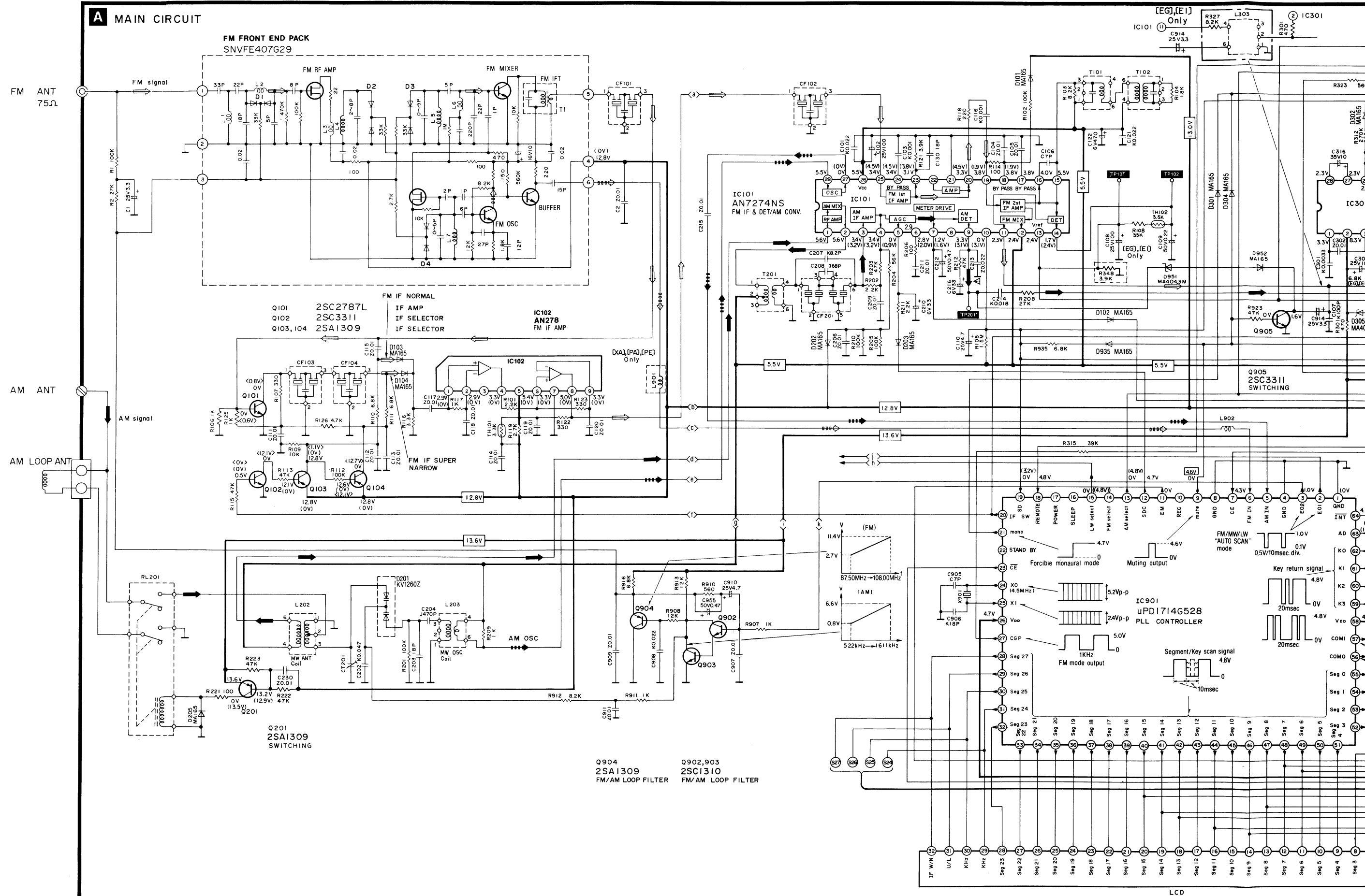
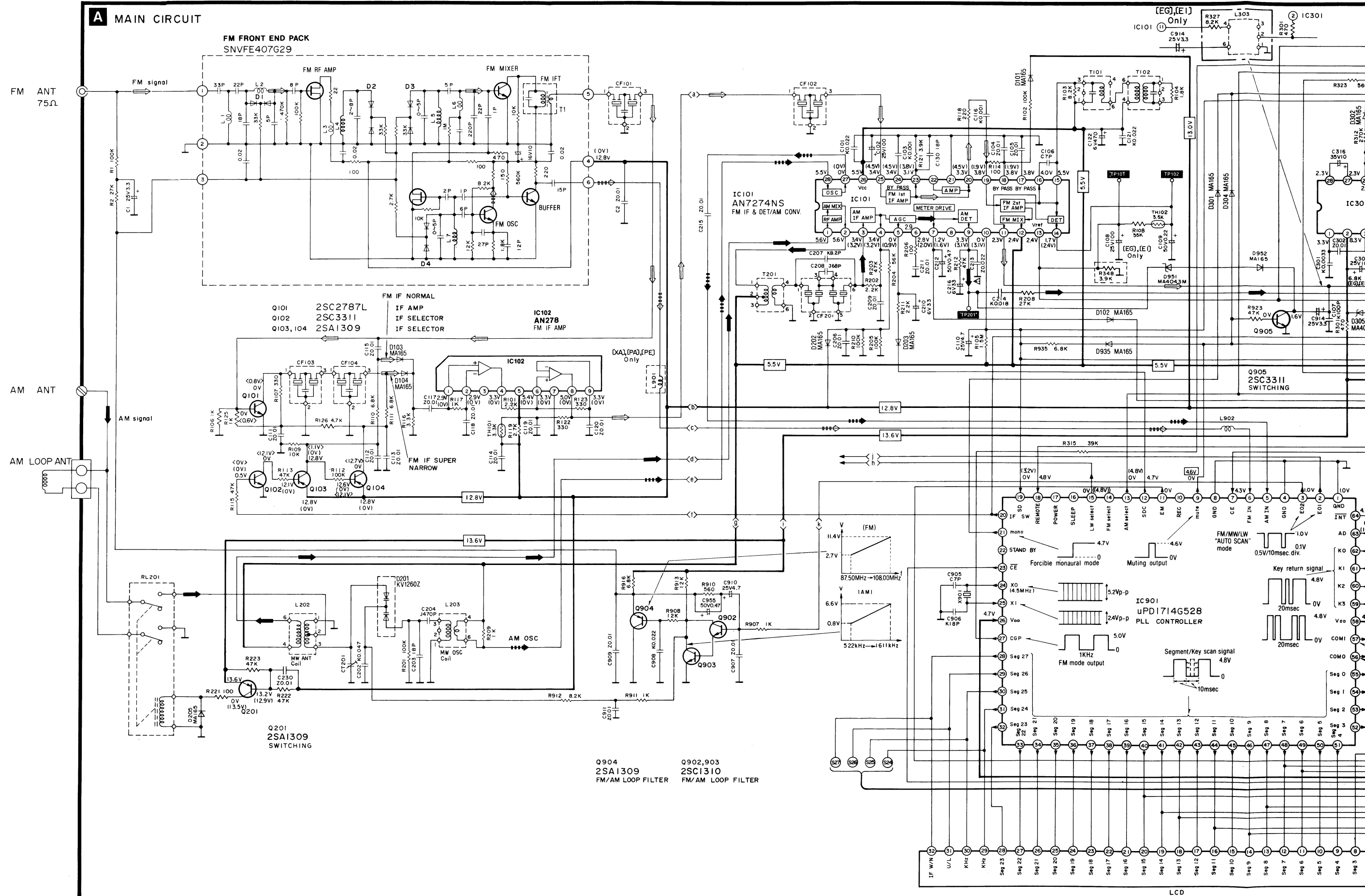
Note: ○ mark: Diode is used.
× mark: Diode is not used.

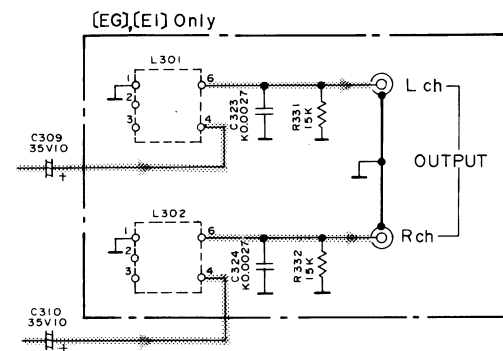
(ST-G55AL only)

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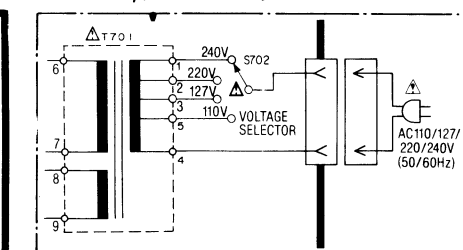
A MAIN CIRCUIT





C LED CIRCUIT

Power source
For [XA],[PA] and [PE] areas



D SWITCH(2)
CIRCUIT

B SWITCH (I) CIRCUIT

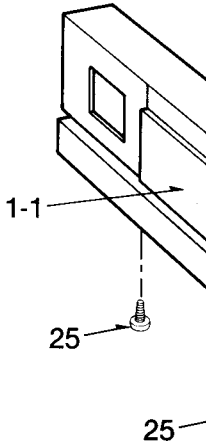
REPLACEMENT PARTS LIST

• Change of Parts List (ST-G55A from ST-G55AL)

Ref. No.	Change of Part No.		Part Name & Description	Pcs Set	Remarks
	ST-G55AL [EK]	ST-G55A [EX, EH, XL, XA, PA, PE, EG, EI]			
RESISTORS					
R251	ERDS2TJ473	————	————	—	Deletion
R252, 253	ERDS2TJ182	————	————	—	Deletion
R254	ERDS2TJ223	————	————	—	Deletion
R256	ERDS2TJ103	————	————	—	Deletion
R302	ERDS2TJ563	ERDS2TJ682	6.8kΩ [EG, Ei] only	1	
R303	ERDS2TJ393	ERDS2TJ123	12kΩ [EG, Ei] only	1	
R306, 307	ERDS2TJ104	————	100kΩ [EG, Ei] only	—	Deletion
R327	————	ERDS2TJ822	8.2kΩ [EG, Ei] only	1	Addition
R328	————	ERDS2TJ272	2.7kΩ [EG, Ei] only	1	Addition
R331, 332	————	ERDS2TJ153	15kΩ [EG, Ei] only	2	Addition
R334	ERDS2TJ274	ERDS2TJ184	180kΩ [EG, Ei] only	1	
R348	————	ERDS2TJ392	3.9kΩ [EG, Ei] only	1	
R602, 609	ERDS2TJ223	ERDS2TJ273	27kΩ [EG, Ei] only	2	
R911	————	ERDS2TJ102	1kΩ	1	Addition
R912	————	ERDS2TJ822	8.2kΩ	1	Addition
R951	ERDS2TJ102	————	————	—	Deletion
R952	ERDS2TJ332	————	————	—	Deletion
R953	ERDS2TJ123	————	————	—	Deletion
R954	ERDS2TJ102	————	————	—	Deletion
R955	ERDS2TJ822	————	————	—	Deletion
CAPACITORS					
C125	ECKD1H103PF	————	————	—	Deletion
C203	ECCD1H150KC	ECCD1H180KC	18 PF	1	
C205	————	ECKD1H103PF	0.01μF	1	Addition
C305, 306	ECQM1H153JZ	ECQM1H223JZ	0.022μF [PA, PE] only	1	
		ECQB1H153JZ	0.015μF [EG, Ei] only	1	
C320	ECFTD223KXL	ECQM1H104JZ	0.1μF [EG, Ei] only	1	Deletion
C322	————	ECQM1H102JZ	0.001μF [EG, Ei] only	1	Addition
C323, 324	————	ECFTD272KXL	0.0027μF [EG, Ei] only	1	Addition
C910	ECEA25M4R7R	————	————	—	Deletion
C911	————	ECKD1H103PF	0.01μF [EG, Ei] only	1	Addition
C951	ECKD1H223PF	————	————	—	Deletion
C953	ECQM1H223JZ	————	————	—	Deletion
TRANSISTORS					
Q251~253	2SC3311A-Q	————	————	—	Deletion
Q255	2SA1309Q	————	————	—	Deletion
Q951, 952	2SC3311A-Q	————	————	—	Deletion
VARIABLE CAPACITORS					
CT251	SVCTZ03R200F	————	————	—	Deletion
COILS AND TRANSFORMERS					
L202	SLA2B3-P	SLA2B1-1M	ANTENNA COIL	1	
L203	SLO2B9R-P	SLO2B7-M	OSCILLATOR COIL	1	
L251	SLA1B7R-P	————	ANTENNA COIL	—	Deletion
L252	SLO1B5-P	————	OSCILLATOR COIL	—	Deletion
L301, 302	————	SLM5B	L.P.F. [EG, Ei] only	2	Addition
L303	————	SLM1B1-P	L.P.F. [EG, Ei] only	1	Addition
L701	————	SLQZ650MH49	[EG, Ei] only CHOKE COIL	1	Addition
L901	————	RLQY25S5-0	[XA, PA, PE] only CHOKE COIL	1	Addition

Ref. No.	Change of Part No.		Part Name & Description	Pcs Set	Remarks
	ST-G55AL [EK]	ST-G55A [EX, EH, XL, XA, PA, PE, EG, EI]			
T701	SLT5K229	SLT5K227	[EX, EH] only POWER TRANSFORMER	1	△
		SLT5K228	[XA, PA, PE] only POWER TRANSFORMER	1	△
		SLT5K229	[XL] only POWER TRANSFORMER	1	△
FRONT PACKS					
FE	SNVFE407G29	SNVFE407G24	[XA, PA, PE] only FRONT END PACK	1	
FUSES					
F1	XBA2C05TB0	XBA2C05TR0	250V, T0.5A	1	△
SWITCHES					
S18~20	SSG13	——	——	—	Deletion
S21, 22	——	SSG13	SW, AM/FM	2	Addition
S702	——	SSR187-1	[XA, PA, PE] only VOLTAGE SELECTOR	1	Addition
CABINET AND CHASSIS					
1	SGWTG55AL-KE	SGWTG55A-KE	FRONT PANEL (K)	1	
1	SGWTG55AL-SE	SGWTG55A-SE	FRONT PANEL (S)	1	
6	SBC812A	SBC811A	BUTTON, BAND (K)	1	
6	SBC812-1A	SBC811-1A	BUTTON, BAND (S)	1	
18	SJS9236	SJS9231-1B	[EG, Ei] only AC SOCKET	1	△
19	SJF8615N	SJF8714N	[XL, XA, PA, PE] only TERMINAL BOARD	1	
		SJF8613-1N	[EG, Ei] only TERMINAL BOARD	1	
23	SGP6373A	SGP6373B	[XL] only REAR PANEL	1	
		SGP6373-1A	[XA, PA, PE] only REAR PANEL	1	
		SGP6373-2B	[EG] only REAR PANEL	1	
		SGP6373-2G	[Ei] only REAR PANEL	1	
36	——	SUS772	[PA, PE, EG, Ei] only SPRING	1	Addition
37	——	SJS9231A	[EG, Ei] only SOCKET COVER	1	Addition
PACKINGS					
P1	SPG5952	SPG5950	[XL] only CARTON BOX	1	
		SPG5951	[Ei] only CARTON BOX	1	
		SPG5949	[other] CARTON BOX	1	
P2	SPS4550-7	SPS4550-1	[XL] only PAD	1	
P3	SPS4551-4	SPS4551-1	[XL] only PAD	1	
P7	——	SPS4672	[XL] only PAD	1	Addition
ACCESSORIES					
A1	SFDAC05G02	SFDAC05E03	[EX, EH, EG, Ei] only POWER CORD	1	△
		SJA163	[XL] only POWER CORD	1	△
		SJA168-1	[XA, PA, PE] only POWER CORD	1	△
A3	SJP9009	SJP9215	[XA, PA, PE] only PLUG	1	
A4	SSA270M	SSA269M	[XL, XA, PA, PE] only FM ANTENNA CORD	1	
A6	SQF12896	SQF12898	[PA, PE] only INSTRUCTION BOOK	1	
		SQF12897	[EG] only INSTRUCTION BOOK	1	
		SQF12901	[Ei] only INSTRUCTION BOOK	1	

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EXPLODED VIEW

